Proceedings of
The Tenth Annual Conference 1990

HEALTH CARE FOR THE VILLAGES AND URBAN SLUMS

January 22 - 24, 1990

Venue:
Gyan Manch, 11 Pretoria Street, Calcutta

Edited by:
Dr. Ashok Sahni
Professor and Hony. Executive Director

INDIAN SOCIETY OF HEALTH ADMINISTRATORS

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Preface

The Government of India has evolved a National Health Policy which lays stress on the preventive, promotive and rehabilitative aspects of health care. The policy provides a comprehensive and integrated approach towards health and development of Indian citizens. The goals of health and development are emphasized in the Constitution of India. This development is to be achieved through elimination of poverty, ignorance and ill-health, by raising the level of nutrition and the standard of living of the people and the improvement of the public health so as to improve the health and strength of the workers, men, women and children and opportunities to develop in a healthy manner.

During the last four decades since attaining Independence, notable progress has been achieved in all spheres of developmental activities including health. Since majority of the population in India at the time of Independence (approximately 85%) lived in villages, India was called the land of villages. There are approximately 5,57,137 villages in India as per 1981 census. Accordingly, the first six Five year Plans laid great stress on rural health. Commendable progress has been made in terms of expansion of rural health infrastructure and posting of health manpower, as reported by the VIII Five Year Plan Working Group of the Planning Commission on Health Care Delivery Services in Rural and Urban Areas.

Nevertheless, the progress in terms of primary health care services and implementing the national health and family welfare programmes has not been as satisfactory as the progress in establishment of infrastructure. The situation called for a soul-searching review of the problems and issues, and, examine innovative strategies and action programmes which could help optimize the functioning of the rural health services, so as to achieve Health for All.

The pressing health needs of the predominantly rural population of Independent India (rightly) ensured an emphasis on development of rural health services. In 1951, 17.3% of the Indian population lived in urban areas; in 1981 this proportion became 23.3% with about 170 millions living in urban areas. With the continuing urbanizing influences of massive industrialization, economic and educational opportunities, and general lure of the town, this number (of urban population) is expected to reach a staggering figure of 460 millions by year 2000, i.e. 45% of India's population. About one third to one fifth of the urban population would be living in slums. Majority of the rural migrants would be compelled to live in slums and squatter settlements, and they would find that conditions in the towns are often inferior in many ways, to what they leave behind. Here, most of the common health problems of the rural areas are greatly exacerbated by the conditions in the slums.

Added to these problems, they are exposed to new types of health risks associated with industrial pollution, road and industrial accidents, air pollution, poisonings, threat to child and adolescents' health, etc. Given the relative neglect of urban health services for the urban poor until very recently, the deteriorating health situation of urban slums dwellers has been a matter of great concern.

Keeping in view the urgency of these major areas of concern, the Indian Society of Health Administrators organized this Conference on Health Care of the Villages and Urban Slums during January 22-24, 1990 at Calcutta with the following objectives:

(a) to create an awareness among the professionals, administrators and the public regarding the issues and problems in health care for the villages and urban slums.

(b) to review the effectiveness of the present organizational structure, infrastructure resources and systems to provide health care to the villages and urban slums.

(c) to review the actions and programmes of the governmental and non-governmental agencies for health and development of the villages and urban slums.

The Conference was inaugurated by the Hon'ble Health Minister of West Bengal, Shri Prasanta K. Sur. Keynote addresses were delivered by Dr. R. M. Varma, Professor Emeritus NIMHANS, Bangalore and Professor B. N. Ghosh, Director, All India Institute of Hygiene and Public Health, Calcutta. The Conference was well attended by professionals, researchers, planners and administrators of health and health related disciplines from the Government, private and voluntary organizations. About twenty-nine papers were presented covering all the subtopics of the conference. In addition to the papers presented, the summary of the issues and recommendation of the Conference, as well as keynote addresses are included in this report.

On behalf of the Governing Body and General Body, grateful thanks are expressed to the Organizing Committee for accepting the challenge of organizing the Conference and for mobilizing the resources for the Conference. I am particularly grateful to Lt. Col (Dr.) D. B. Ray, Chief Coordinator, Kothari Medical Centre and Member, ISHA Governing Body, whose leadership and efforts in organizing this conference deserve special mention.

We are grateful to the Department of Science and Technology, Ministry of Science and Technology, Government of India, New Delhi and the United Nations Children's Fund, Regional Office for South Central Asia, New Delhi for financial contribution towards partial printing cost of this publication.

Indian Society of Health Administrators hopes that leaders, administrators and professionals at national, state and institutional levels will reflect upon and implement the suggestions and recommendations towards better health and a quality of life in the villages and urban slums.

Dr. Ashok Sahni
Professor and
Hony. Executive Director
and Editor

Summary, Conclusions and Recommendations

I. Content of the Conference

The Conference considered in depth the following aspects of health care of the villages and urban slums:

a) Present system of administration and organization vis-a-vis health care of the villages and urban slums

b) Infrastructure resources for health care

c) Innovative/alternative approaches - successful and non-successful.

d) Priorities and strategies for health care

e) Manpower planning, development and training of health manpower

f) Involvement of people in environmental, preventive and promotive health, and other developmental programmes to promote self-reliance.

g) Application and use of appropriate technology.

h) Information, education and communication for social change.

i) Plans and actions to meet future health care needs of villages and urban slums.

II. Conference Methodology

The Conference was inaugurated by the Hon'ble Health Minister of West Bengal, Shri Prasanta Sur. He was happy with the theme and the timing of the Conference. After over ten years of the Alma Ata Declaration, the health status of the people was far from satisfactory. He said we had good doctors but poor administrators. He emphasized that the medical education, attitudes and motivation of health personnel, particularly the doctors, needed to be improved. He was particularly happy that ISHA was playing a significant role in India in training and development of health administrators and creating awareness in the health professionals and administrators to professionalize the health systems. He felt the need for low cost technology to be applied for effective health care of the villages and urban slums. He also appealed to the medical fraternity to serve the rural and urban poor.

Keynote addresses were delivered by Dr. R. M. Varma, Professor Emeritus, National Institute of Mental Health and Neuro Sciences, Bangalore and Professor B. N. Ghosh, Director, All India Institute of Hygiene and Public Health, Calcutta. Dr. Varma stated that revolutionary changes in the physical and biological sciences were being discovered and a holistic approach to health care was being emphasized. In the light of these changes, our strategies to health care for the villages and urban slums would need to be changed.

Dr. Ghosh indicated that before Independence in 1947, the aim of the health system was quality service to the few. After Independence, the aim has been total care to all, which required equitable distribution of services. He noted that there was acute crisis of primary health care in urban areas and there were imbalances in allocation and availability of resources and infrastructure. These imbalances needed to be corrected.

Keeping in view the content of the Conference, nine panel discussions were held. The Conference was attended by approximately 100 delegates comprised of planners, professionals and administrators from governmental departments, health and medical, training and research institutions, voluntary organizations and medical and health professionals.

III. Issues and Recommendations

General

1. The Conference affirmed that significant progress had been made, since Independence, in terms of establishment of health infrastructure, control of communicable diseases, remarkable reduction in mortality rates and improvement in maternal and child health.

2. The Conference noted with concern that in spite of establishment of various national level committees, and planning and programming of health services for villages and urban slums after the Alma Ata Declaration, the health status of the people has not shown any significant progress as per the indices of health.

3. The Conference observed that almost 10 years after Alma Ata Declaration, the health status of the people, particularly in villages and urban slums was still far from expectation. It was observed that even today more than one third of the rural population did not get even the most rudimentary type of health services.

Present System of Organization and Administration for Health Care

4. The Conference noted with concern that the present system of organization and administration of health care at the top level - at the Centre and States, was not conducive to provide effective continuing leadership which was critical for successful implementation of primary health care. There were frequent changes of ministers, secretaries and joint secretaries (in one state, for example, there have been 15 health secretaries in the last 10 years). The Conference recommended that committed and stable leadership should be provided for implementation of policies and primary health care programmes.

5. In the present system of administration, lack of communication and interaction between the technical bodies and the ministries at both State and Central levels was recognized to be a major source of conflict which resulted in lack of team spirit, unduly delayed decisions and ineffectiveness in the working of the departments. The Conference recommended that the organizational structures need to be changed to facilitate effective communication and coordination.

6. The Conference noted that since health institutions were under the administrative control of different officers, conflicting orders were issued and there was high degree of confusion as to who had the authority for what. For example, proper co-ordination and consensus was needed between the Directors of Medical Education and the Director of Health Services (or between Public Health Directors and Medical Services Directors) to plan the staff and working of the teaching/first level referral hospitals to satisfy both teaching/referral responsibilities as well as primary health care responsibilities. This would result in much better urban health performance in National Health and Family Welfare programmes than is the case today.

Infrastructure for Villages and Urban Slums

7. The Conference noted that the rural health care infrastructure, as designed, is adequate quantitatively to provide primary health care. However, in practice, the primary health care is not at all operationalized. To achieve the health care goals and for effective implementation of the primary health care strategy, we would need to operationalize this vast infrastucture.

8. The Conference noted that after Independence, great emphasis had rightly been made on creating rural health infrastucture given the predominance of rural population. Only since the Sixth Five Yer Plan, urban health planning received some attention. The Conference also noted that while a majority of the medical and health institutions were established in urban cities, health care coverage in urban areas, particularly slums, had been very poor.

9. The Conference noted that massive industrialization, economic and educational opportunities and the general lure of the town have resulted in progressive increase in urban population. By the year 2000 A.D., the urban population is expected to rise from current level of 22 to about 45 per cent of the total population. One fifth to one third of this population will be living in slums. This would present a serious problem of providing adequate health care services to the vulnerable slum dwellers.

10. The Conference noted that housing, sanitation, water supply, drainage and solid waste disposal were the basic amenities for meaningful health programmes. The WHO has estimated that 80 per cent of the health problems in the slums were related to water supply and sanitation. The Conference recommended that serious attention should be paid to innovative ways of raising resources to tackle these problems which needed substantial investments.

Leadership and Manpower Development

11. The Conference noted that due to lack of career planning, lack of proper placement of specialists and non-specialists, lack of promotional opportunities, lack of job descriptions, etc., there is very low morale and high degree of job dissatisfaction.

12. Major problems and issues in regard to better utilization of available health manpower and infrastructure in the rural areas, and revamping of urban health infrastructure towards provision of better health care for the rural areas and urban slums emerged. The Conference felt that the immediate need is to plan and initiate clear-cut action programmes to bring up the performance of the health teams to the desired level. Towards this, the strategy, schedule and content of training programmes for health manpower at all levels needs to be re-examined and recast so as to inculcate skills of leadership, team-building, and the skills of relating with the community and health programmes. Apart from motivational and behavioural input in training programmes, clear-cut in-service training and re-training schedules should be set up to train staff at all levels, from the District Health Officers to the Health Worker level to equip them with the kind of technical skills needed to carry out their job duties. For example, the health worker (female) is virtually responsible for basic primary MCH care and yet skills like conducting deliveries, screening ANCs and other aspects are often sadly lacking.

13. The Conference felt that since adequate staff were available in the rural areas as per prescribed norms, they should be made responsible for coverage of population for the various services and monitored accordingly rather than a preoccupation with achievement of targets of activities.

Strengthening Health Care System

14. The Conference noted that there was inadequate information with regard to the health, infrastructure resources, need of the community, present resources, projected resources, and other salient features of the community both of the villages as well as urban slums. Therefore, the Conference recommended that immediately health profiles be prepared of villages, taluks, districts and urban slums of each urban city. These profiles will help in planning, programming, development of infrastructure, allocation of manpower and development and mobilization of resources for meeting future needs of the villages and urban slums.

15. The Conference observed that various studies with the slum population had shown that the health status of the slum dwellers was in fact much poorer than even the rural population as measured by the mortality and morbidity indicators. In West Bengal, as stated by the Hon'ble Health Minister in his inaugural address, twenty per cent of the slum dwellers required secondary and tertiary care treatment. Keeping the above in view, the Conference recommended that a balanced health care infrastucture and a sound primary health care programme should be established to provide health care in a comprehensive manner.

16. The Conference noted that bulk of the slum population lived in major cities where most of the medical colleges and nursing schools were also located. Professional manpower from these institutions, particularly the Departments of Social and Preventive Medicine, could be effectively utilized in planning and implementation of health programme, as was being done by the Municipal Corporation of Visakhapatnam.

17. The Conference noted that about 40 - 50 per cent of the work force of metropolitan cities was engaged in the small scale industries, domestic industries and services sector with low remuneration, job insecurity, working with hazardous chemicals and accident proneness. The Conference recommended that innovative schemes could be devised by the Government to provide some form of organized health coverage to these people, possibly with the involvement of the employers in small, locally organized schemes.

18. Keeping in view the high degree of accident proneness in urban slums, especially of children, accidental poisoning, industrial chemical poisoning, etc., the Conference recommended that creation of well-equipped and viable accident and emergency centres at suitable points in the cities, nearer to slums, is a must. Even though establishment of such centres might be an expensive proposition, the numbers and complexity of cases occuring in the context of growing industrialization and over-crowding, will be beyond the capability of primary health care infrastructure.

19. There is a growing realization of need for intersectoral coordination and increasing role of health personnel in drawing cooperation from other departments since health and development are inseparably linked. There is need to

define adminisrative channels of communication, responsibility and control between the various departments working at the grassroot level directly with the people. In this connection, the experience of the Urban Comunity Development Department of the Municipal Corporation of Visakhpatnam needs to be studied in depth to adapt suitable principles to the conditions prevailing in the rest of the country.

20. Several experiences of innovative approaches to elicit community participation and multisectoral approaches to promote health and development of the community served were presented. Community based approaches to health care included, the Lutheran World Service (India) Project in a slum of Calcutta, the Dharavi Slum project by L.T.M. Medical College, Bombay and the RUHSA Project in North Arcot District. Most of these projects as well as the Urban Health Centre, Chetla Project of the Calcutta Municipal Corporation had attempted an intersectoral approach. It was recommended that the organizational and management factors of these projects should be studied and suitable changes introduced into the training, administrative and monitoring system to build in an intersectoral approach to health by the government functionaries too.

21. The Conference noted that apart from the projects initiated by the voluntary agencies based on community participation, intersectoral approach and collaboration with government agencies, there are instances of successful community participation, intersectoral approach and collaboration with voluntary agencies in projects initiated in the government sector. The Visakhapatnam and Hyderabad Municipal Corporations have experimented with this approach in their slum improvement and health projects after making certain administrative and organizational changes complemnted by a sound leadership. It was recommended that these projects be studied in depth so as to find ways and means to replicate or adapt the process in the health system, urban or rural, throughout the country.

22. The Conference observed that community participation, right from the First Five Year Plan, had been recognized to be a major factor for the success of the health and family welfare programme, particularly primary health care programme. This was based on the premise that the people must be involved in their own health and treatment, and their judgements about their priorities must be taken into account. The community should be involved in planning, implementation, monitoring and evaluation of health care. The community may provide manpower and materials and time whenever needed. The authority to determine the demands and resources as well as mobilization and deployment should be vested in the community.

The Vishakapatnam Slum Improvement Project and the Hyderabad Slum Improvement Project, both part of the municipal corporations of the two cities, among many other projects of similar nature, had demonstrated the effectiveness of community participation. The Conference recommended that the process of planning and implementation of such projects be replicated in villages and urban slums.

23. The Conference noted that in designing and maintaining a health infrastructure in the urban areas, the potential role of private practitioners, who far outnumber government functionaries in urban areas, should not be forgotten. Besides

their obvious roles in health education and family planning motivation of their clientele, the government health departments in the cities may attempt to involve the private practitioners for providing curative and other type of services on a part-time basis, which would cut down the costs of maintaining a huge manpower on government rolls. This experiment has been tried in several places and could be explored further to utilize the services of private practioners optimally.

ISHA Tenth Annual Conference 1990 on "Health Care for the Villages and Urban Slums" hopes that these deliberations will stimulate all concerned to initiate policies, programmes and mobilize resources to meet with the health needs of villages and urban slums. ISHA would be very happy to provide any professional assistance that may be necessary in this endeavour.

INAUGURAL ADDRESS

Sri Prasanta K. Sur
Hon'ble Health Minister,
Government of West Bengal

In the Alma-ata Conference of 1978 a firm commitment has been made to achieve "Health for all by year 2000 A.D." by all countries including India. Since then, National schemes, projects and programmes have been formulated and organized for health care of the people by experts, professionals and planners. The health care facilities were extensively created to support the implementation of planned programmes. Manpower in health has been planned and produced to man the health service. Technology has been innovated and applied. In doing, creating and organizing the above, exactly 10 years have already passed. Unfortunately, the health status of the people of India particularly in villages and urban slums is still far from the expectation. The country has still, very high birth rate, infant mortality and maternal mortality rate. People suffer in great numbers from malaria, tuberculosis, leprosy and other communicable diseases. There are of course many factors causing such deplorable state of health. It is still observed that even today more than 1/3 of the rural population do not get even the most rudimentary type of health services and furthermore, whatever services are given to the rest is curative oriented with utter neglect of promotive and preventive health care services. The value of non-health sectors input to the health care services is understood well; yet integration between health and health related services is severely lacking in parts of the country. Financial constraint is often highlighted as the key factor for all these issues. But available studies indicate that low cost technology can be applied effectively and can be made to produce improved results in health status of the people. From all these deductions, it is thought that there must be some problems in planning the programme as regards its appropriateness. The time is definitely overdue to assess critically what has been achieved since the Alma-ata declaration was made and to identify the areas of failure so that new approaches and strategies may be thought of and applied to solve the identified health problems.

Fresh analysis of the situation may lead us to redesign the programme with appropriate prioritization of health problems. This need-based action plan has to be made now and immediately, otherwise it will be too late to do anything to reach the target and to achieve the goal, thereby admitting the failure of commitment to achieve health for all by the year 2000 A.D. It is with this view the Conference has been organized to mark the 10th Annual Conference of Indian Society of Health Administrators (ISHA) and it is expected that all the issues as mentioned above will be highlighted to have meaningful recommendations at the end.

II. PRESENT SYSTEM OF ADMINISTRATION AND ORGANIZATION VIS-A-VIS HEALTH CARE FOR THE VILLAGES AND URBAN SLUMS

1. Present Organizational Structure and Major Issues for Development of Health Services at Centre, State, District and Periphery Levels

*Ashok Sahni**

I General

Socio-economic development including health development is the ultimate objective of the country. In this paper the present organizational structure at Centre, State, Divisional and District Levels is briefly discussed along with the problems and issues in the present organizational system. In addition, recommendations are made for an appropriate organizational design at these levels.

Planning, financing and implementation of health services is a state responsibility in a federal setup. Health planning, however is part of the total planning system and therefore the responsibility of the Centre. Therefore the organizational structure, communication and co-ordination between the centre and state levels has to be designed in such a way that the States could carry out their responsibility in keeping with the health plans and policies as an integral part of the total planning system of the country.

II Issues in Organizational Structures for their Development

The major issues which affect the planning, designing and functioning of the health organization at Centre, State and District Levels are as follows:

a. Present Organizational Structure

The health system of the country, the largest governmental organization next only to the Education Department, employs large number of administrative, technical, para-medical and non-technical personnel and through this huge infrastructure it caters to the needs of approximately 800 million people. In the next 10 years or so, the structures will have to be expanded to reach out to meet the curative, preventive and rehabilitative needs of about 1030 million people. Thus the number of hospitals, primary health centres, technical institutions, medical educational institutions to be co-ordinated and controlled which is already very large, would increase much more in the next decade. *Co-ordination and management of these diverse types of institutions to achieve HFA through Primary Health Care is going to be much more difficult.*

*Dr. Ashok Sahni, Professor and Hony. Executive Director, ISHA, Bangalore

b. Lack of Continuing Effective Leadership at Various Levels

Keeping in view the complexities of administering such a large health infrastructure to fulfil a wide variety of objectives ranging from curative services through preventive, promotive rehabilitative services and teaching medical students, it is obvious that the health organization both at Centre and State Levels requires a stable continuing leadership. The leaders should be able to have a comprehensive grasp of the total health system - the policies, objectives and constraints within the existing health system (for example, the medical and curative orientation of most of the doctors and para-medical staff and their lack of preventive - promotive orientation). In reality, however there are frequent changes in the Union Ministers, State Ministers, Secretaries, Special Secretaries, Joint Secretaries, Senior Officers of DGHS, etc. Similarly there are frequent changes in the rank and file at the State Levels. This does not permit the incumbents to gain the insights required for health administration for development.

c. Lack of Communication

There are series of problems with regard to vertical and horizontal communication both at Central level between the Ministry and the technical bodies as well as between the Centre and State Levels. It is extremely important that proper communication and interaction be established so as to promote team spirit, speed up the process of decision making, and improve the efficiency of the department. This is particularly relevant in the context of the lack of communication and interaction between the Ministries and Directors at the State levels and also between the Centre and the States. Conflicts between these wings, often resulting from a lack of proper delineation of powers, roles and responsibilities, have frequently resulted in delayed decision-making, inefficiency and demoralization.

d. Co-ordination and Control

Throughout the system, it is observed that co-ordination is extremely weak and ineffective. The health system consists of different types of institutions charged with multiple objectives and responsibilities (like the teaching hospitals charged with both curative responsibilities and teaching responsibilities, the district hospitals with curative, preventive, promotive responsibilities as well as newly added teaching and training responsibilities). The teaching hospitals are under the charge of Directors of Medical Education; in some States the non-teaching hospitals and district and taluk levels are under the Director of Health and Family Welfare, and in some States these are under the Directors of Medical Services. In yet other States where district hospitals are serving as teaching hospitals the line of control is even more fuzzy. And yet, all the hospitals and health institutions are required to function in line with the professed commitment of the Government of India for primary health care. Co-ordination and control of the different officers to arrive at a consensus on the functioning of their respective departments in consonance with the national objective of primary health care, is virtually absent.

At another level, that is, between the lower level institutions and referral hospitals, there is no communication and co-ordination to fulfil their respective roles in the primary health care programme.

e. Job Satisfaction and Morale

Throughout the system there is high degree of dissatisfaction and low morale due to lack of career planning, lack of promotional opportunities, lack of proper job descriptions and other problems.

f. Channel of Communication and Command

Since institutions are under the administrative control of different officers, confusing orders are issued and there is high degree of confusion as to who is the authority with regard to what.

g. Lack of Clear-cut Job Duties and Responsibilities

This has resulted in confusion, duplication of activities, undue delay and wastage of resources.

III Designing a Sound Organizational Structure

A sound organizational design would be based on the following principles:

a. Organizational design is a means to achieve the organizational goals, and it is not an end in itself.

b. It should be such as to achieve maximum human resource utilization and provide job satisfaction.

c. It should provide for means to communicate roles and policies of the top management to the lower levels and to communicate the problems and needs of lower level management to the top in a expeditious manner.

Keeping in view the above principles, it is proposed that organizational structures suitable to each state should be designed based on a model structure which can be adapted to the requirements of the individual states. Model organizational structures at the state, divisional and district level are proposed as shown in Figures 1 - 6.

It is recommended that at the State level, a position of Director General of Health and Family Welfare services be created who will work very closely with the Secretary Health and Family Welfare. The Director General will directly report to the Minister of Health and Family Welfare and should provide leadership for the total system at State level. He should have established leadership qualities atleast on two branches of the services under him. He should have a national or international status and also the ability to co-ordinate the activities with other States, the Centre and with International organizations. If the above recommendations are to be followed, the basic principle would be that the appointment would be made on merit basis rather than on seniority basis. The Director General should be appointed for a fixed period of say five years with a review of performance at the end of two years of his appointment. If found satisfactory his services could be extended for further one, two or three years. He could be from

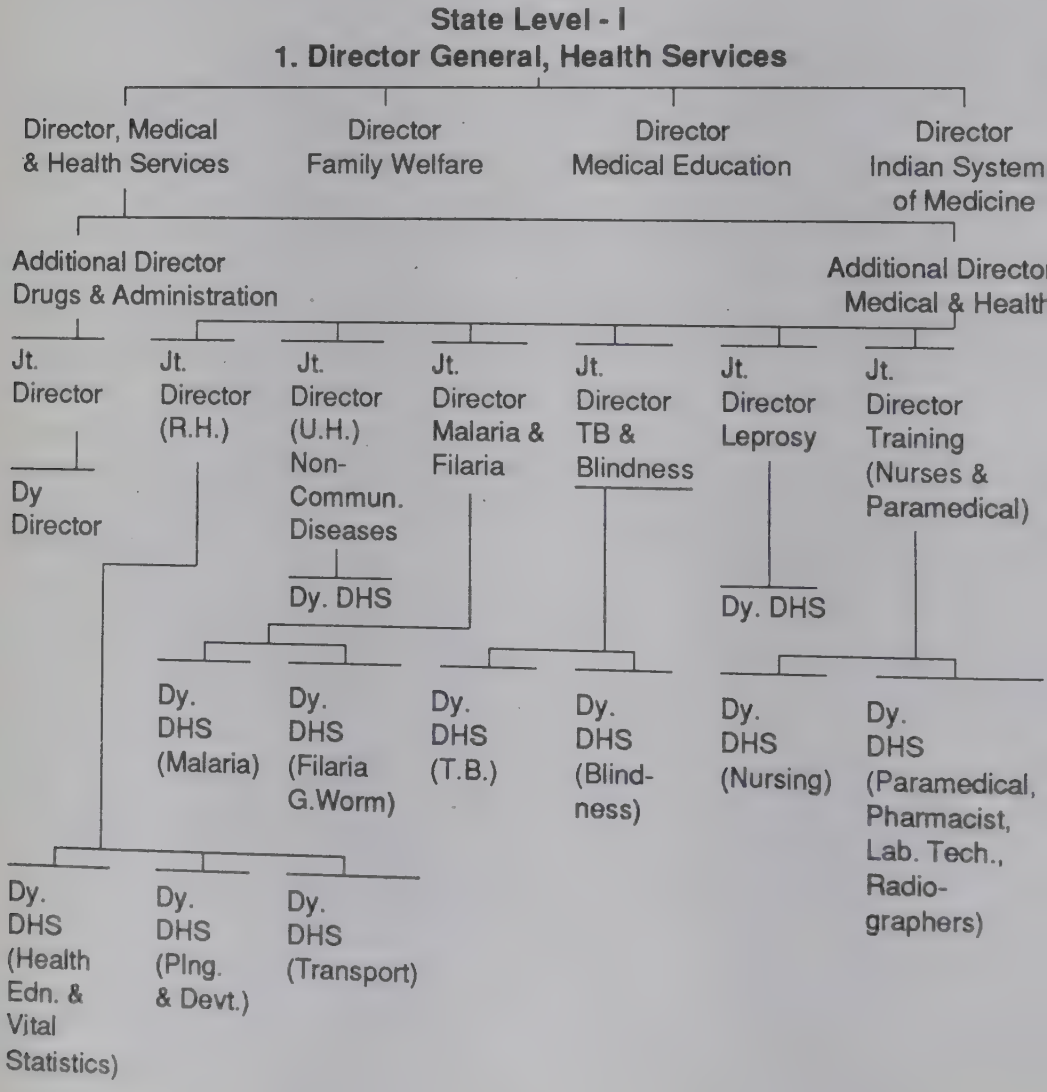
Government or private services, from academic or from professional organiza tions.

Similarly the Directors of Health and Family Welfare Services and Medica Education should be appointed based on a proven track record of leadership an abilities in the respective fields.

At the Central level, keeping in view the needs of national planning, ac countability to the Parliament under the democratic set up, and the challenge c implementation of priority programmes in the country, role clarity between Min istry and DGHS is urgently needed.

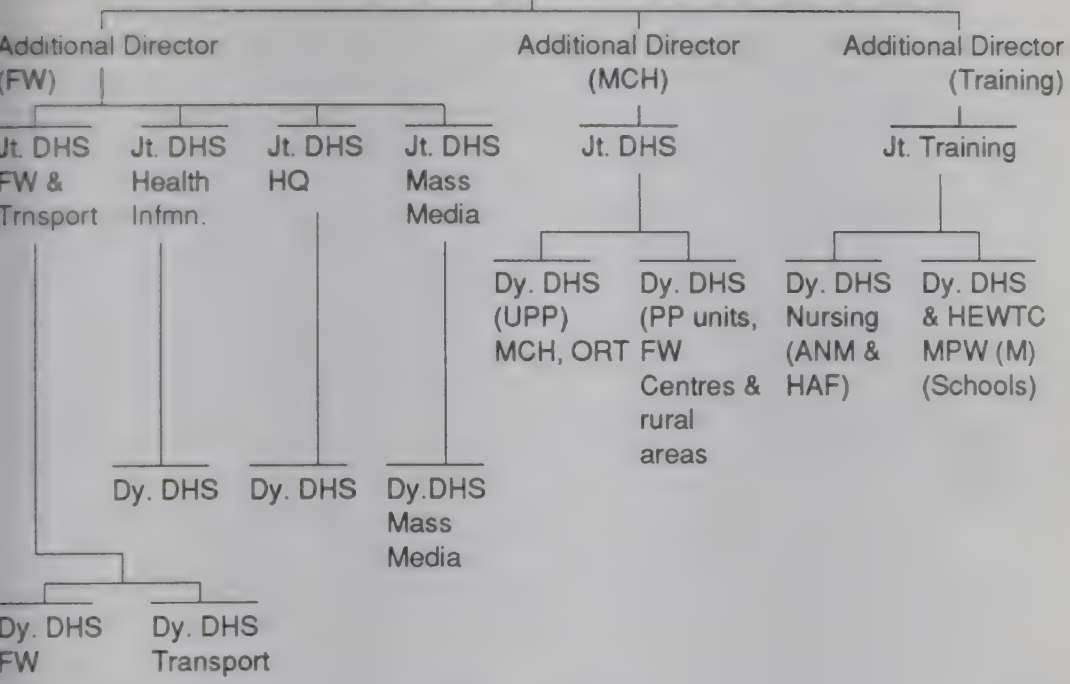
IV Establishment of Indian Health Services

The Mudaliar committee had recommended the creation of an Indian Med cal Service to infuse competent public health leadership in DGHS to bring abou more dynamism and imaginativeness in its functioning. Instead of Indian Medica Service, the Indian Health Service should be initiated to infuse a dynami leadership at all levels of the health system.


State Level - I
1. Director General, Health Services
Director, Medical & Health Services
Director Family Welfare
Director Medical Education
Director Indian System of Medicine
Additional Director Drugs & Administration
Additional Directo Medical & Health
Jt. Director
Jt. Director (R.H.)
Jt. Director (U.H.) Non-Commun. Diseases
Jt. Director Malaria & Filaria
Jt. Director TB & Blindness
Jt. Director Leprosy
Jt. Director Training (Nurses & Paramedical)
Dy Director
Dy. DHS
Dy. DHS
Dy. DHS (Malaria)
Dy. DHS (Filaria G.Worm)
Dy. DHS (T.B.)
Dy. DHS (Blind-ness)
Dy. DHS (Nursing)
Dy. DHS (Paramedical, Pharmacist, Lab. Tech., Radio-graphers)
Dy. DHS (Health Edn. & Vital Statistics)
Dy. DHS (Plng. & Devt.)
Dy. DHS (Transport)

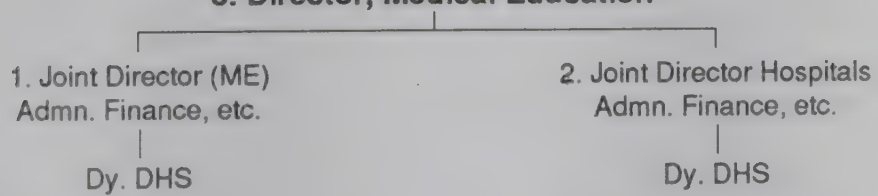
State Level - II

2. Director, Family Welfare



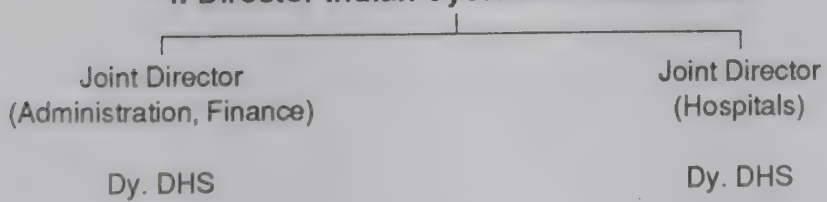
State Level - III

3. Director, Medical Education



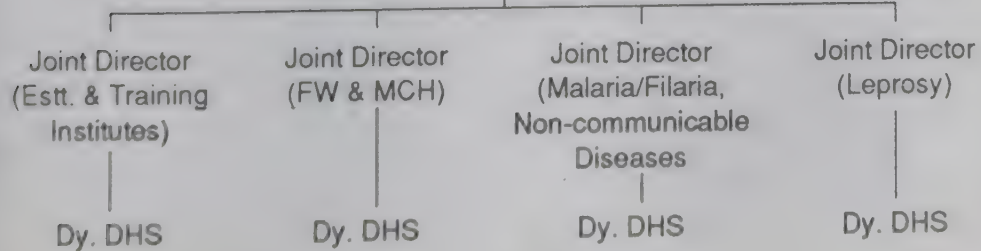
State Level - IV

4. Director Indian Systems of Medicines



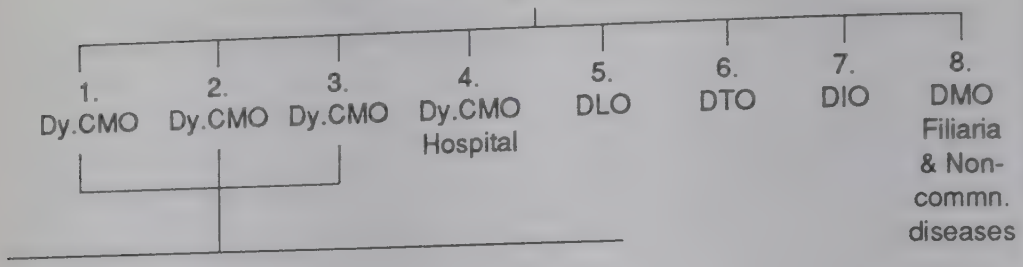
II. Divisional Level

Additional Director



III. District Level

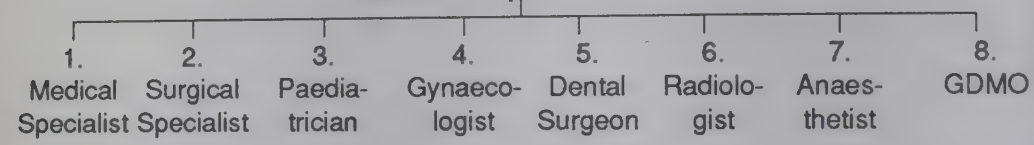
Chief Medical & Health Officer



For CHC & PHC
area to be divided among these three.
They will be responsible for establishment
of infrastructure and implementation of
primary health care and national programmes.

IV. Community Health Centre

Medical Superintendent



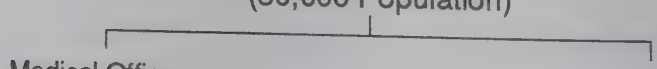
Paramedical Staff

1.	Pharmacist	- one	7.	LHV	- one
2.	X'Ray Technician	- one	8.	ANM	- one
3.	Lab Technician	- one	9.	Driver	- one
4.	Opth. Assistant	- one	10.	Class IV	- six
5.	Staff Nurses	- four	11.	UDC	- one
6.	O.T. Assistant	- one	12.	LDC	- one

Block Extension Educator - will conduct health education in whole of the block.

V. Primary Health Centre

(30,000 Population)



Paramedicals

1.	Pharmacist	- one	8.	MPW (F)	- six
2.	Computer	- one	9.	ANM	- one
3.	LDC	- one	10.	Driver	- one
4.	Lab. Technician	- one	11.	Class IV	
5.	Health Assistant (M)	- one		Peon	- one
6.	Health Assistant (F)	- one		Aya	- one
7.	MPW (M)	- six		Sweeper	- one

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2. Present System of Administration and Organization for Health Care in Urban Slums of Madras.

*Hyma Balachandran**

Introduction

The Madras Municipal Corporation and Bombay Municipal Corporation are ncluded in the India Population Project-V aided by the World Bank.

) City Profile

Some important demographic and health data of Madras City are given in able - 1

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*Dr. (Smt.) Hyma Balachandran, MBBS, D.G.O., IPP Project Co-ordinator, Madras ity Corporation

Table - 1

Salient Demographic and Health Indicators of Madras City

	1961	1971	1981	1984(85)	1986
1. Population					
Total	-	24,69,449	32,76,622	-	37,40,000
Males	-	12,97,195	16,94,107	-	N.A.
Females	-	11,72,254	15,82,517	-	N.A.
2. Growth Rate	-	42.81%	-	32.69%	1.9% (1985-86)
3. Area in Sq. km.	-	128 sq.km.	173 sq.km.	-	173 sq.km.
4. Population Density/sq.km.	-	19,292/ Sq. Km.	19,274 Sq. Km.	-	-
5. Literacy Level	59.47%	62.05%	65.78%	-	66.53%
6. Sex Ratio Females/1000 Males	901	904	930	-	939
7. Average No. of Persons/house hold	-	7	5	-	-8
8. Couple Protection Rate	N.A.	22.2%	-	41.9%	46.3%
9. Birth Rate (Per 1000)	-	38.8	31.02	27.0 (1985)	26.4
10. Death Rate (Per 1000)	-	12.04	9.02	7.4 (1985)	7.2

b) The Health For All goals to be achieved by year 2000 are as follows:

Key Indicator		*Level to be achieved*
1. Contraceptive prevalence rate (couple protection rate) (CPR)	..	60% effective prevalence
2. Immunization coverage	..	Universal Coverage
3. Ante-natal care	..	Universal Coverage
4. Post Natal Care	..	Universal Coverage
5. Institutional delivery	..	98%
6. Birth Order	..	Reduction in proportion of 3rd and higher order births
7. Growth monitoring		

II. Present System of Health Administration in Madras City

The health system of the City of Madras functions at three levels - the health posts, the zonal level and the District Family Welfare Bureau. The functions carried out at the levels are as follows:

. The total number of health posts sanctioned are 74.

a. Government - 4; b. Voluntary - 12; c. Corporation - 68

Remaining 41 health posts are being sanctioned this year and the next year. The staff and coverage pattern of the health post is as follows:

On an average each health post covers a population of 30 to 45 thousand. Once all the health posts start functioning and all the M.P.H.W.S. complete their training, each M.P.H.W. will be incharge of a population of 5000. The individual M.P.H.W. is responsible for Family Welfare and MCH coverage. Enumeration of the population would be carried out during April, May and June and will cover all the eligible couples of the area assigned to each staff. This would be supervised by the L.H.Vs who also make check field visits. The various streets under the jurisdiction of the MPHW will have door wise details of the protected and unprotected eligible couples. She will have a micro plan as to the area where she will work each day of the week and what she plans to do each day of the week. The details of micro plan will be put up in consultation with the Medical Officer and L.H.V. who will clearly mention the performance level of each individual MPHW with regard to the specific goals of the project.

Emphasis is laid on the training status of each cadre of staff including keypost officers so that the continuing medical education results in good progress and achievement of goals and objectives.

i. Zonal Level

A middle level of supervision has been sanctioned for the IPP-V by creating Zonal Centres with Zonal Officers and Dy. Communication Officers who will monitor the performance of 5-6 Health Posts with regard to Family Welfare and M.C.H. delivery services. There will be fortnightly reviews, field survey checks and to and fro communication and updating of all the particulars and statistical details from the Bureau and the Health Posts with regard to administration, accounts, stores, MIES, I.E.C. and training. These Zonal Centres in addition have got operation theatres to provide sterilization and MTP services. The I.E.C. activities likewise will be concentrated and need-based and will cater to the area specific requirements.

Eighteen zonal centres have been sanctioned out of which 15 are in position at present. Six have operating theatres and the remaining have been sanctioned building for operation theatre and Post Operative Ward.

For monitoring purposes, the respective groups of Health Posts are linked to each zonal centre. Dy. Communication Officers of the Centre report to the Zonal Officer of IEC activities for monitoring the performance levels, contraceptive prevalence rates, and couple protection rate. Each zonal centre is provided with an Audio Visual Vehicle (three more zonal centres are due to start functioning in 1990 - 91).

The functioning of the 125 Health Posts will be streamlined and monitored by the respective cells. The M.I.E.S. (Management Information Evaluation System) mainly deals with statistical details of achievements which is an important tool to evaluate demographic impact of the project on the population. The officers of the M.I.E.S. are trained at Gandhigram Training Institute, Ambathurai as well as at Bombay Institute of Population Sciences for specialized training. Mini Computer will be in position shortly so that the details can be fed and up-to-date information obtained from it. Many co-ordination meetings are being conducted along with the consultant - Ferguson & Co. to see that the registers and records are maintained most effectively. Field check visits for sample verification and baseline survey studies are also carried out.

iii. District Family Welfare Bureau (Administration)

The District Family Welfare Bureau has been strengthened in order to implement IPP-V successfully. At the Bureau level, key posts have been sanctioned as follows:

a. Population Project Co-ordinator ...1
b. Deputy Project Co-ordinators ...2
c. D.F.W.M.Os ...3

There are five cells as follows:

a. Administration - Administrative Officer with clerical staff
b. Accounts cell - Accounts Officer with clerical staff
c. M.I.E.S. cell - Assistant Programme Officer with statistical assistance and computers.
d. Training cell - Training Co-ordinators with clerical staff
e. I.E.C. cell - Communication officer, IEC Officers with clerical staff.

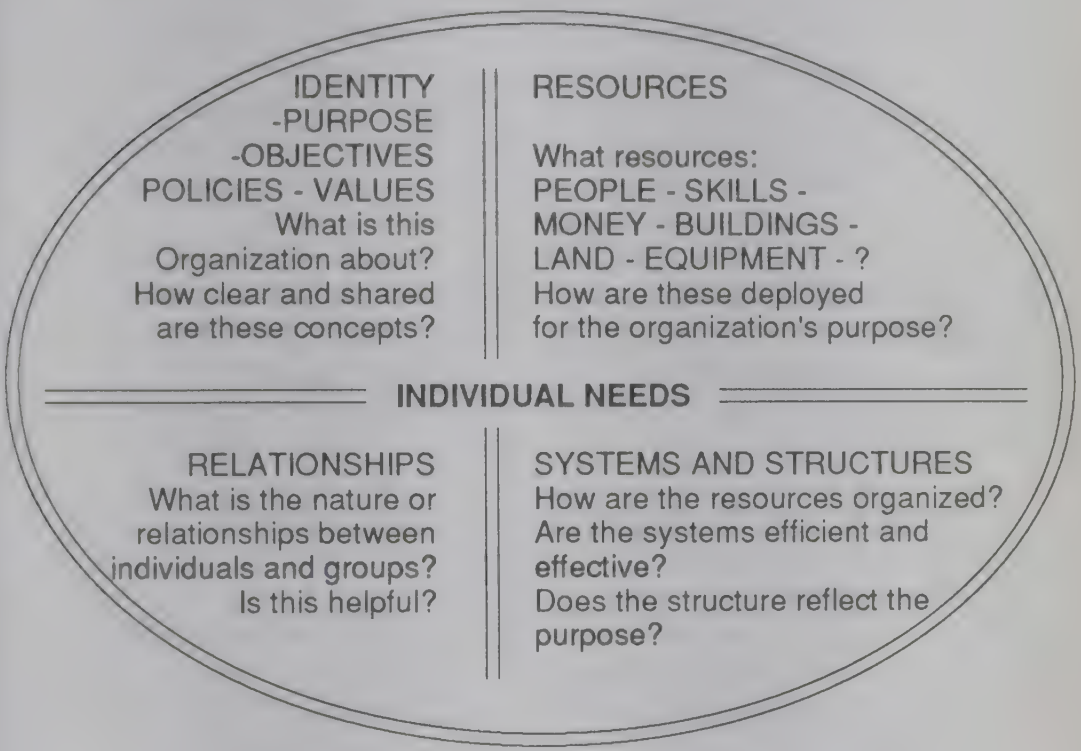
In the field of I.E.C. (Information Education & Communication Cell) equal emphasis is given for promotion of temporary family welfare methods. Innovative programmes for popularising temporary methods especially Oral Pill are being adopted in four slums and two additional slums are being taken up to further adoption of the temporary methods. A comprehensive approach is taken up for promotion of I.U.D. (Cut) by holding camps in various parts of the city, in an organized manner. The training cell is a new concept as far as Corporation of Madras is concerned. The Population Project Co-ordinator and Deputy Project Co-ordinator who underwent training for Health Managers at the Institute of Child Health, University of London have developed the training cell to provide inservice training for Multi-Purpose Health Worker (F) through a six month urban slum health course. The current set of M.P.H.Ws. are being trained exclusively for India Population Project - V. The MPHW trainee students, 540 in number at present, undergoing training in the various Training Schools of Tamil Nadu for 12 months, will be trained by the District Family Welfare Bureau for six months following the curriculum and syllabus stipulated by the Director of Public Health Training and C.M.E.

This is expected to ensure that they are successfully oriented to achieve the project objectives and goals.

III. Few Concepts in Organizational Design and Development

The following concepts have been useful to plan and design an organizational structure suitable for achieving the goals and objectives of IPP-V.

1. An Organization is like a Wheel:



2. Usefulness of Study of Organizations

2.1. General

To help people in organizations understand their own organization or part of it better and therefore provide a base for decision-making.

2.2. Specific

i) any group of managers or trainers carry out a basic analysis of their organization.

ii) Identify issues, opportunities, resources and a working plan for the future, which can be used as an Evaluation & Planning Tool with groups.

3. All organizations have to be developed keeping in view the goals and objectives, resource availability and constraints. The following roles and activities are required for organizational development.

Roles	Activities	Results
Diagnoser	Help get the facts and analyse them.	Sound data about key issues for more effective decision making.

Planner	Assist in setting up action plans and develop a strategy.	Data prioritised. Actions proposed to solve or handle issues suggested by the data/ situation. Steps to move proposals into action.
Assistant Problem solver or conflict Manager	Using one or more method to assist the client in getting the problems out where it can be classified and analysed and develop action plans to handle the problem	Problems identified and defined. Forces affecting the problem analysed. Action steps developed for managing the problem/ opportunity.
Team builder or skills builder	Providing teams with ways to increase their effectiveness	Greater team capacity for open communication and data flow. Improved group work, problem solving and decision making. Increased common knowledge and skills. Improved work climate.
Conflict Manager	Helping examine and reduce conflict situations where feasible.	Conflict handled creatively Reduction of conflict where appropriate.
Systems Analyst	Examining how such areas as structure, decision-making, communications, personnel procedures, rewards/punishments and employee participation affect the functioning of an organization.	An analysis of how effective an organizational system is in the way it is formed and functioning
Process Observer	Viewing and analysing an individual's or work group's functioning.	An analysis of what is working well, what needs improving in-how communication takes place, how problem solving/ decision making is utilised, and how an effective work climate is maintained.
Change Process Expert	Giving input/methodologies on the impact of change and how to plan for it.	A review of effect of change on individual, work group or organizational functioning and productivity. Planned

		change, rather than haphazard reactions to problems/opportunities. Ways to meet resistance to change.
Individual Developer	Helping individual managers analyze, solve problems, helping develop career paths	Special attention given to key issues and to management needs. Persons with increased sense of a career path and with action plans to bring about their career directions.
Organization Developer	Assisting work groups, individuals and organizations in bringing about planned change	A focussed, planned effort to increase productivity and effectiveness within an organization or among its employees and work groups
Interpersonal Developer	Providing ways to enrich human interaction and enhance working relationship and climate	More effective communications and interpersonal relationships. An improved work climate.
Skills Builder	Providing training for individual work group and organizational growth using a variety of methods	Persons with new or enhanced skills in such areas as interpersonal relationships, management, leadership, problem-solving/decision making, group effectiveness, communications, motivation, creativity; meeting leadership needs.

3. A Case Study of Management of the Outpatient System in a Health Centre Located in a Slum Area

*B. N. Ghosh**

I. Introduction

A health centre in a metropolitan city covering a population of 66,000 with O.P.D. and outreach services and without any inpatient bed, was receiving constant complaints from the community that they are to wait for long hours in the O.P.D. to avail the services. Accordingly, they are discouraged to utilize the services even though the services are free. Only 13 percent of the community were using the full range of services available from the Health Centre and 68 percent partially utilized the services.

It was then decided to study and analyse the O.P.D. system of the health centre to identify bottlenecks and take appropriate remedial measures so that prolonged waiting time can be reduced.

Services being offered at the Health Centre:

The health centre, serving a population of 66,000 is situated in a slum area of Calcutta. There are 11 medical officers and 34 field workers including P.H.N., lady health visitors, sanitary inspectors and social workers. The centre runs daily O.P.D. services (sector clinics), besides running emergency clinics and speciality clinics like ante-natal, well baby, school health, mental health, tuberculosis, sexually transmitted diseases, nutrition and dental health clinics either in the morning or in the evening session. On an average, daily O.P.D. attendance is around 230. The centre has a well equipped clinical laboratory and bi-weekly X-ray facilities.

II. Study Methodology

Study plan was made after detailed discussions with the physicians, nurses and other functionaries of the health centre. A flow chart of the O.P.D. patients from reporting for registration to discharge from dispensary counter or any other relevant last point, were drawn up and all the existing patient care activities in the health centre were identified. A total of 14 such points were identified. A suitable proforma was designed to record for each patient, their time taken during the flow through various points in terms of reporting time, attention time from physician, nurses, pharmacist and at the clinical laboratory along with idle (waiting) time at each service point.

Data Collection: The above data for all patients attending the health centre for O.P.D. services during the first week of March, June and September months in

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1980 were recorded. This was obtained by handing over the proforma to each patient with instructions to note reporting time, the moment he or she reports to the health centre, and collecting it back from him, when he or she leaves the health centre with time noted. Earlier, all functionaries of the health centre were briefed and instructed to note on the proforma of the patient attended by them, the exact reporting time and releasing time. Thus a total of 928 forms were handed out, of which 42 and 46 were respectively either missing or had to be cancelled for various reasons. The total number of forms available for study were therefore 840. Average attention time, waiting time, queue length, etc. were calculated. The findings are presented below.

III. Findings

A. Before the Management Interventions were made:

a. Registration: Table 1 shows the average daily queue length observed at the registration point during different time intervals. Highest queue length was observed at 9 - 15 a.m. However, it builds up from 8:30 a.m., reaches its peak at 9:15 a.m. and almost dissolves at 10:00 a.m. Another peak was observed at 10:30 a.m. Registration starts at 9:00 a.m. and stops at 10:45 a.m. Most of the patients or their (child) attendants were working mothers, mostly maid-servants. They go for work early in the morning and finish it around 10:30 a.m. and rush for their O.P.D. tickets before the registration is closed at 10:45 a.m. This explains the second peak at 10:30 a.m.

b. Waiting time: Table II shows the frequency distribution of waiting time of the patients, before any intervention. It shows that majority of the patients had to wait for less than half an hour at most of the points, except at the sector clinics where the percentages of patients who waited for less than 30 minutes, 30 minutes to 60 minutes and more than 60 minutes were, 45.3 percent, 34.2 percent and 20 percent, respectively. It also shows that 26.4 percent of the patients had to wait for 30 minutes to 60 minutes at the reception counter and dispensing counter.

c. Attention time: Table III shows the average attention time received by patients. It shows that for males and females respectively, 15.7 percent and 17.3 percent of the total time spent in the health centre was attention time, or in other words, 34.3 percent and 82.7 percent of time spent by males and females was spent on just waiting for attention. Interventions taken as described at IV (a) and (d) were to bring it down to a reasonable level.

IV. Management Interventions Devised and Results

a. At Registration Counter: One more registration clerk was added to help the existing clerk between 9:00 a.m. to 9:30 a.m. It drastically reduced the average waiting time of the patients at registration point, and almost dissolved the queue length as early as 9:30 a.m. (Table 1).

b. Dispensing Counter: Longest queue length observed at dispensing counter was 11:00 a.m. and the pressure started building up at around 10:30 a.m. and continued till 11:30 a.m. (Table IV).

Two courses of intervention were available to dissolve this queue at dis-

pensing counter. One was to put an extra manpower at the dispensing counter during the peak hours. Unlike at the registration point, extra-manpower at this point means a technical hand, namely a pharmacist or a dispenser who was not readily available. Furthermore, cost-benefit-wise it was found unacceptable to engage a new pharmacist or dispenser to dissolve a pressure point of such a short duration namely 10:30 a.m. to 11:30 a.m.

Alternative intervention thought of was to make some changes in the dispensing method. It was observed that around 67 percent prescriptions contained few drugs like sulfadiazine, enteroquinol, iron, multi vitamins and analgesies like aspirin, etc. All these drugs were prescribed only for two days at a time and patients were instructed to report on the 3rd day for further days. Taking advantage of the existing system, it was decided to pre-pack the required doses of these drugs on the previous evening in small packets on which a rubber stamp was given earlier, indicating the dose schedule, for example 2 tablets three times daily or 1 tab twice daily, etc. During dispensing hours, these packets were distributed to the concerned patients against prescription. It reduced the waiting time in two ways - one by reducing the dispensing time, and the other by reducing the talking time to the patient by way of explaining every time, the number of tablets and the time the drug has to be taken. Result of this simple and inexpensive intervention is reflected in Table IV.

V. Conclusions

The study showed that a simple time and motion study of an O.P.D. system and suitable inexpensive interventions can go a long way to improve the efficiency of a health centre and thereby encourage the community to utilize its services.

Table I

Daily Average Queue Length Observed at the Registration Point at Different Time Intervals, Before and After Intervention.

Time a.m.	*No. of patients waiting (queue length)*		Remarks
	Before intervention	After intervention	
8:00	2	0	
8:15	10	5	
8:30	22	14	
8:45	35	81	
9:00	40	82	Registration starts
9:15	45	28	
9:30	32	13	
9:45	15	4	
10:00	3	5	
10:15	0	1	
10:30	15	19	
10:45	9	4	
11:00	0	0	Registration closes
Total	**228**	**336**	

Table II

Frequency Distribution of Waiting Time of Patients at Various Service Points Before the Intervention

	Waiting Time (minutes)	Service Points					
		Reception	Record Room	Sector Clinic (Physician)	F.P. Physician	Immuni zation/ Injection	Dispen-ser
	0-5m	326	429	57	117	39	108
	0-10m	66	150	48	37	24	118
	0-15m	64	73	45	33	20	110
	0-20m	31	37	42	18	12	81
	0-30m	104	23	92	47	14	155
Total	0-30m	591 (70.4)	712 (95.2)	284 (45.8)	252 (71.6)	109 (90.1)	572 (74.6)
	-40m	94	19	80	39	3	75
	-50m	83	9	84	31	4	41
	-60m	45	4	48	15	2	24
Total	30-60m	222 (26.4)	32 (4.3)	212 (34.2)	85 (24.2)	9 (7.4)	140 (18.2)
	-70m	12	3	43	8	2	27
	-80m	7	1	32	3	-	12
	-120m	7	-	48	4	1	11
	-160m	1	-	1	-	-	5
Total	60-160m	27 (3.2)	4 (0.5)	12 (20.0)	415 (4.2)	3 (2.5)	55 (7.2)
Grand Total		840 (100)	748 (100)	620 (100)	352 (100)	121 (100)	787 (100)

Table III

Average Attention Time (in minutes) Received by Male and Female Patients

	Male	Female
1. Total time spent (average per capita)	68.31	64.76
2. Attention time (average per capita)	10.73	11.19
3. Attention time as % of total time (2/1)	15.7	17.3
4. Sector Clinic Physician time as % of total attention time	18.75	15.98
5. MCH clinic time as % of total attention time	12.03	10.63
6. Per capita Physician's time in minutes	3.3	2.98

Table IV

Daily Average Queue Length Observed at the Dispensing Counter at Different Time Intervals, Before and After Intervention

Time (a.m.)	Before Intervention	After Intervention	Remarks
9:00	0	0	Registration starts
9:15	2	2	
9:30	5	3	
9:45	10	7	
10:00	12	6	
10:15	14	5	
10:30	32	13	
10:45	40	18	Registration closes
11:00	51	21	
11:15	34	9	
11:30	21	4	
11:45	7	1	
12:00	3	2	
12:15	2	1	
12:30	5	0	
Total		**92**	

III. INFRASTRUCTURE RESOURCES FOR HEALTH

4. Situational Analysis of Health Care Infrastructure in the Villages and Urban Slums Current Status, Problems, Issues and Recommendations

Ashok Sahni and Sudha Xirasagar**

This paper presents an analysis of health care infrastructure in the villages and urban slums. The paper specifically presents the infrastructural developments which have taken place, an analysis of achievements, gaps, problems and management issues. Some recommendations are made towards effective development of health services and systems.

I. Introduction

1. The current situation with regard to health status and health services in the country is a matter of great pride and at the same time of great concern. We have made since Independence, tremendous achievements during the last 42 years when we compare the status today with the appalling pre-independence situation as assessed by the Bhore Committee. In pre-independent India, a population of about 350 millions was being served by doctors at a rate of one for every 6300, one nurse for every 43,000 population, one health visitor for every 4,00,000 population and one midwife for every 60,000 population. The hospital bed availability was 0.24/1000 against an estimated requirement of 10 beds/1000 population given the rampant incidence and morbidity due to communicable diseases.

2. Mortality and morbidity were very high. The crude death rate was about 44/1000; maternal mortality rates were estimated to be about 20/1000 live births; infant mortality rate was 162/1000 live births. There was virtually no couple protection with family planning, and life expectancy at birth was a mere 32 years. Birth attention was by untrained dais as a rule. Communicable diseases accounted for major proportion of deaths. 2.5% of deaths were due to cholera, 0.5% due to plague. Incidence of malaria cases was more than 75 million per year and millions died due to malaria, in a population of about 350 million[1].

3. Today, as a result of planned overall development and development of health services in the country, even with a population more than double the population at Independence, the availability of health manpower is as follows: One doctor for every 2,680 (almost at par with the desired norms laid down by Mudaliar Committee); One nurse for every 4,500 population and one health visitor for every 30,000 population[8]; The bed availability is expected to have improved to 0.59/1000. During this period mortality rates at all ages have shown a

*Indian Society of Health Administrators

welcome declining trend. Overall crude death rate is about 11.1/1000 (1986)[11]; infant mortality rate was about 96/1000 (1986)[11]; maternal mortality rate 3-4/1000; very few deaths due to cholera; deaths due to malaria can be counted in hundreds; virtual disappearance of plague, and so on.

4. We have progressed from a situation when there was no concept of multipurpose health workers, and the concept of health care was only in the form of medical care delivered by doctors, nurses and midwives. Today we have one female multipurpose worker for every 5000 population. From the first Two Plan Budgets devoting 50% of the health budgets for beds and hospitals, we have moved to a situation in the Seventh Plan (1985-90) wherein rural health schemes, communicable disease programmes and family welfare claimed 81% of the total health outlay (Rs.5365.3 crores out of a total of health sector outlay of Rs. 6,649 crores)[11]. (See Appendix Table)

5. The current situation is also at the same time a matter of serious concern. More than a decade after the Alma-Ata declaration, in spite of massive expansion of health infrastructure, the progress with regard to delivery of Primary Health Care services have been very slow as indicated by the health and mortality indicators, performance under the various programmes, trends in communicable diseases and family welfare indicators.

6. Progress of Primary Health Care Services as Reflected in Mortality and Morbidity Indicators Since Alma Ata declaration

6.a. *Current National Health Status vis-a-vis HFA Goals for the year 2000:* India became a signatory to the historic declaration of Alma Ata in 1978 and thus accepted primary health care as the strategy and approach for delivery of health care to all her citizens. In 1983, the National Health Policy, keeping in view the existing status, national resources and capabilities, announced the Health For All goals to be achieved by the year 2000. The progress of delivery of Primary Health Care services has at best been modest. Table II shows where we are today in 1988 with regard to the health, mortality and family welfare indicators as compared with the HFA goals by year 2000, laid out in the National Health Policy.

6.b. *Changes achieved so far in Health and Family Welfare Status since the Alma Ata declaration (Pre and Post):* The achievements of the health care delivery system, after the renewed commitment to primary health care at Alma Ata, in terms of health and family welfare indicators does not show much change over the years 1976 - 87 (88). Table III shows the changes observed in 1988 or so, as compared with the years prior to Alma Ata.

7. Thus it is a matter of great concern that in the last ten years, not much progress has been gained even though the number of subcentres has more than doubled since 1979-80, number of PHCs has also more than doubled, number of Community Health Centres gone up almost five fold during this period and 5.85 lakh dais trained since 1974[9 & 12].

These findings suggest that we need to address to ourselves the following questions:

i) What are the health infrastructural and manpower resources today in the rural areas and urban slums where the vast majority of population lives and from where the health of the country emerges?

ii) Are these adequate as per norms, and also, are they adequate for achieving the HFA goals through Primary Health Care?

iii) What are the problems and issues with regard to the proper utilization of existing resources and manpower for achieving the goals?

iv) What are the feasible innovative strategies that can be implemented and how do we go about implementing the strategies?

II. Health Infrastructure in the Villages - Present Status, Problems, Issues and Recommendations Towards Operationalizing Primary Health Care in the Rural Areas

8. Physical Facilities Established in Rural Areas - Current Status

In physical terms the availability of health infrastructure in the rural areas is shown in Table IV.

With these achievements it would mean that we have almost achieved 100% of requirement of subcentres and Primary Health Centres and 50% of the requirement of Community Health Centres even by liberalized norms:

This is the position as far as the physical facilities are concerned.

9. Operational aspects of these Health Facilities

9.1. Subcentres

9.1.1. Manpower Availability: The subcentre is the most peripheral unit manned by a female and a male worker. It is estimated that about 70 - 80% of health problems can be tackled at this level. Adequate number of female health workers are available to man the subcentres. Only about 5% of the subcentres (5794 out of 1,21,776) had no female health worker in position. There is a shortage of male health workers, only 81,432 in position as against a number of 1,21,776 subcentres functioning.[12]

9.1.2. Drugs and equipment at the subcentres: The standard set of drugs, equipment and furniture as laid down were noted to be lacking in most of the subcentres and, therefore, inspite of adequate number of subcentres, and manpower availability, family welfare services like IUD insertion and midwifery were felt to be poor, apart from lack of drugs for treatment of common ailments, which are very much needed to improve the credibility of the subcentre and ANM's services.[9]

9.1.3. Mobility of the Health Worker: As of now there has been no systematic attention paid to the question "what mode of transport should be specified and provided for field work of the Health Worker".

9.2 Primary Health Centre

9.2.1. Manpower Availability at PHCs: There are very few PHCs without a doctor in position - less than 1% of the functioning PHCs (only 121 out of 19,173) had no doctor. However, there are many vacant posts especially in respect of second medical officers[12].

9.2.2. Drugs and Equipment: It was noted by the Working Group that the drugs budget of Rs.12,000/- per annum is very low. Availability of drugs and especially of essential drugs is far below the needs[9].

9.2.3 Mobility of Health Staff: Much more mobility for the PHC staff is required for coverage of the population for health and family planning services, and the supervisory-cum-weekly clinic visits by the medical officers and health visitors to the subcentres, than what is currently available at most PHCs. The chief constraints are, very old vehicles or vehicle out of order, very low POL budgets, etc. As of today, the approach to providing mobility to health staff is still conventional, in terms of providing government transport, failing which public transport (which is quite unreliable in rural areas) is expected to be used.

9.3 Community Health Centres

The Community Health Centres have been established to the extent of 50% of the total requirement (as per the norms of one per lakh population). The manpower norms for these CHCs are, posting of four key specialists (physician, surgeon, obstetrician and paediatrician) so as to provide adequate referral services. The actual position, however, is that at the 1665 CHCs established by 30.6.89 only 346 surgeons, 250 obstetricians, 154 physicians and 170 paediatricians were in position. Thus the establishment of CHCs has not necessarily meant that referral services are actually being provided to the rural population.

The role and responsibility of the CHCs in the public health organization of the district is yet to be clearly defined and operationalized.

9.4 The Village Health Guide Scheme

As per information available 3,36,095 villages have been covered by the village health guide services[12]. The actual contribution of the village health guides in the primary health care programmes, their achievement and feedback is not available to the planners and administrators to strengthen the scheme; the present monitoring and information system does not provide for monitoring of these aspects.

9.5 Dais Training

By April 1989, 5,85,577 dais were trained in the rural areas[12]. Again, there is no provision for feedback and assessment of their functioning and practices after training and therefore, it is difficult for the PHC and District administrators to assess the areas where further inputs are needed to ensure that trained dais are functioning optimally.

III. Problems and Issues with Regard to Health Care Delivery in the Villages

The problems and issues chiefly relate to the question, "How are we to operationalize the vast and largely adequate Primary Health Care infrastructure already built up in physical terms, so that Primary Health Care really reaches the Masses"[9].

10. In spite of adequate number of doctors posted in the rural health institutions (as per norms), adequate number of female health workers, and ideal norms o

coverage of population by the various categories of primary health care personnel, a process which was accelerated over the past 10 years or so, the health and family welfare status has not shown commensurate change. What programmes do we plan to initiate to bring up the performance of the health manpower or health teams to the desired level of efficiency so as to achieve the HFA goals?

11. It has been observed and reported by many authors all over the world that the primary factor which influences the success of any programme including health is leadership[13,14,15].

What are the changes in strategy and content of the training programmes (initial and ongoing) that we can make, to inculcate leadership skills in the medical officers who are envisaged to be the leaders of the health team for primary health care? How do we plan to ensure fairly uniform and high quality of the content of these training programmes all over the country?

12. Primary Health Care strategy envisages a graded system of health care services to cater to health needs in the most cost effective way. Thus we have maximum number of subcentres as compared with higher levels of health facilities, manned by a team of two health workers, and 70 - 80% of health problems can potentially be tackled by them. Lack of adequate skills to deliver quality care, especially MCH care at subcentre level has been a serious constraint for enlisting confidence of the people in the health services. Similarly lack of supervisory skills among the multipurpose health workers to guide and utilize the services of the village health guides and dais is a prominent feature. Imparting such skills is not a part of the formal health worker training course. Many similar mismatches are present in the job requirements on the one hand, and actual skills and training level of health personnel on the other. This problem is present at all levels of health personnel. Thus there is a serious need for a complete revamping of the existing training schedules and content of training for all levels of health workers.

13. The data presented in Table IV shows that in physical terms, a fairly adequate network of community health centres to provide referral services has been established. But when one looks at the number of specialist posts actually sanctioned even at these centres, one sees that the number of specialists in position at the Community Health Centres is inadequate and in many states, woefully insufficient even though there is unemployment of specialists in the towns and specialists working at PHCs in many states. This shows lack of a proper personnel policy with regard to health manpower, although the professed commitment to Primary Health Care also includes provision of specialists to deliver referral health services without which the credibility of rural health services is eroded, and Primary Health Care becomes a second class health care operating only because it is "cheap" and "affordable" for the vast rural masses. A proper and uniform personnel policy in this matter needs to be implemented in all states.

14. Community participation has been recognized to be a major factor for the success of health and family welfare, or any development programme. This is a type of skill that is needed in all levels of health personnel for the success of primary health care, and it is particularly lacking given the present attitudes,

organizational setup and training. What specific action programmes do we plan to initiate, to specifically inculcate skills of relating to the community and drawing community participation among health personnel at all levels?

15. One of the major hurdles in operationalizing the past primary health care infrastructure, has been the lack of concept of coverage of population at all levels. The administration at all levels - Central, State, District and PHC levels, have so far been preoccupied with numerical achievements of targets of activities and not the overall outcome of the activities, which is actually the meaning and goal of Primary Health Care. Thus we find that every year, the targets which are set, be it for sterilization, immunization coverage, malaria slides, tuberculosis control activity, etc. are apparently being more or less fully achieved over the last few years, but in terms of population coverage, the indicators like couple protection rates, birth rates, disease incidence or mortality have changed only marginally (as seen in Table III).

What kind of a monitoring and evaluation system can we devise so as to monitor and give feedback on the outcome of the various programmes in the community, alongside monitoring of achievements of targets of the various programmes in terms of activities?

16. There is a clear realization that health results from multisectoral development and that there is need for multisectoral coordination. The need for multisectoral coordination is not only related to the direct effects of nutrition, housing and environment on health status. If the health programmes are to become the people's programmes, health has to be perceived by people as their own "felt need". To generate this kind of need and demand in respect of health, the health personnel have to respond to whatever felt needs are articulated by the people to whatever extent possible, whether the felt need is for drinking water supply source, increasing economic and agricultural productivity, etc. In this context close coordination of the health sector with the other sectors like agriculture, cottage industries, etc. becomes highly effective in bringing about health and development of the society[13,14,15]. What policies, strategies and administrative linking up of functions and responsibilities do we plan to introduce, to operationalize multisectoral coordination?

17. Studies of successful implementation of primary health care programmes in the voluntary sector or even in government sector showed that one of the important factors influencing success was, that the change agents settled down in the community, became a part of the community, and were able to take the community into confidence over a period of time[13,14]. Today, the government policies all over the country, without exception, places more emphasis on regular transfer of personnel, which does not favour development of sustained rapport and commitment between the community and the health services. There is an urgent need to look into this aspect and come out with an innovative comprehensive policy on transfers and placements.

18. An important feature of primary health care is that the programmes and activities should be need-based, based on the regional and local health profiles. Till date except for conforming with the targets set by the Central, State and

District levels under the health and family welfare programmes, and provision of some curative services, there is no evidence of the health system being responsive to local health needs.

What actions do we plan to take to generate local, regional, and state health profiles so as to make the health services need-based, and effectively cater to the needs of the local community?

19. The contribution of the voluntary sector in health care has been increasingly coming to light. Study after study has documented the strengths of the voluntary sector[14]. The need to involve voluntary agencies and collaborate with them has been stressed in the Five Year Plan documents, Health Policy statements and so on. The question is, how do we plan to go about operationalizing this principle?

There are case studies available of successful collaboration elicited by the Government agencies like the Visakhapatnam Slum Improvement Project of the Municipal Corporation and a similar project in Hyderabad[14]. We need to carefully study the organizational and management aspects of such projects to formulate a feasible strategy of collaboration between the government and voluntary sector which can be replicated in the rest of the country.

20. We have today 3,93,556 doctors of indigenous systems of medicine, most of them practising in smaller towns and rural areas who enjoy the confidence of the rural population. Several studies have found that for their health problems, a good proportion of the rural population approach a traditional healer. What concrete strategy and programme are we planning to involve the traditional practitioners in health and family welfare programmes?

IV. Health Care Infrastructure for the Urban Slums - Current Status, Problems and Issues, and Recommendations Towards Effective Health Care

21. In the introductory paragraphs an overall picture of health status in the country in terms of morbidity and mortality indicators was presented. The national health statistics taken separately for urban and rural areas shows that the rural areas enjoy a relatively lower health status as reflected in the health and family welfare indicators. This has been the rationale of the emphasis on creating rural health infrastructure. However since the time of the Sixth Five Year Plan, there has been growing realization of the relative neglect of urban health services especially for the urban poor living in slums.

22. Trends in Urbanization and Growth of Slums

With the massive urbanization and concomitant growth of slums and slum population, the deteriorating health of slum dwellers began to attract attention. In addition to the health problems related to under-nutrition, the urban burden of very poor housing, inadequate or absent sanitation coupled with overcrowding, and the respiratory effects of indoor and outdoor pollution, resulted in marked morbidity and mortality in urban slums. When the proportion of slum dwellers began to rise alarmingly, health care in slums became the focus of attention.

Table V shows the all India trends in urbanization over the past four decades

when the urban population of India increased three and half times, whereas the population as a whole only doubled during this period.

23. Increasing Slum Population with Increasing Urbanization

The growing urbanization is expected to increase the number of slum dwellers and squatters out of proportion to the growth of urban population. The relationship between the size of the city and proportion of slum dwellers can be seen from Table VI.

Thus it has been estimated that by the year 2000 about 45% of the population of India would be residing in urban areas and about one third to one fifth of them would be living in slums.[9]

24. Current Health Status in the Urban Slums

It is generally recognized that health status in urban slums is worse than that of the rural areas. Overcrowding which is a feature of slums as compared with open spaces in rural area results in far greater health hazards for the urban poor than the poor in the rural areas. Thus morbidity and mortality indicators in the slums are far more grave than even rural areas as shown in Table VII. It may be noted that even though the urban rural differentials show a greater degree of health problems in the rural areas, the high concentration of ill-health and mortality rates in the urban slums as shown shown in Table VII warrants greater attention to the health of the slum population.

Apart from conventional diseases of poverty, the incidence and death due to respiratory diseases is higher both in adults and children of slum areas and has been shown to be correlated to poor housing conditions. Even among the hutments, the incidence of ill-health in children was 30 - 50% lower in the best settlements than in the worst[18].

The above data and several other indicators show that health in the urban slums is often much worse than in the rural areas.

Poor housing, overcrowding, air pollution both due to outdoor and indoor pollution, toxic automobile wastes and industrial wastes (such as lead from exhausts of automobiles leading to chronic lead poisoning) all these are urban factors adding to the burden of poverty, which lead to increased illnesses in urban slums.

25. Present Availability of Health Infrastructure for Urban Slums

Substantial health infrastructure is available in the urban areas. More than one thirds of total bed capacity in the country is located in the urban areas, and the beds available is almost as per norm - 1 bed/1000. Secondary and tertiary care services are mostly located in the urban areas. Majority of the private practitioners are located in the urban areas. Most of the 126 or more medical colleges with their huge hospitals and specialities are located in the urban areas.

26. Primary Health Care Services in Urban Areas

Inspite of availability of vast amount of medical manpower and facilities, primary health care services and infrastructure for primary health care is not satisfactory as seen by the prevailing health status. There is wide variation in the actual position of health infrastructure specifically to provide primary health care from town to town. In terms of accessibility to the urban poor, and coverage, the

situation is not satisfactory.

V. Problems and Issues with Regard to Health Care for the Urban Slums

27. Keeping in view the present low coverage for primary health care and family planning in the urban slums, by what strategy do we plan to implement primary health care in the urban slums given the conditions peculiar to slums and the realization that we need a different type of approach compared with rural areas?

High turnover of slum population (often as much as 10% in one year), prolonged working hours of slum population leading to difficulty for the health staff to establish contact with them, and many other complex factors need to be taken into consideration to design a suitable approach to provide primary health care services to slum population.

28. Housing, sanitation and water supply play a very significant role in health. According to WHO estimates, 80% of urban slum population in India is not covered by protected water supply and 91% is not covered for sanitation[21]. This leads to high incidence of water borne diseases, not to speak of the cesspools and collections of water, breeding mosquitoes, which has led to increased vector borne diseases. Malaria and filaria are now regarded chiefly as urban problems. Thus merely planning health infrastructure for the slums will not solve the health problems.

Core services have been identified which are basic amenities to be provided - water supply, sewerage/sanitation, solid waste disposal, water drainage, roads, street lighting and if necessary land preparation. It is estimated that Rs,740/- to Rs.1,450/- investment per capita is needed to provide these core services[21]. Keeping in view the Planning Commission's estimates of 191 million urban population uncovered by these services by year 2001, how do we plan to raise the huge amount of resources involved for provision of these services, without which isolated health infrastructure planning cannot make an impact?

29. Keeping in view the critical role of community participation, not merely for accepting the health and family welfare programmes, but also active participation of the community for the related programmes of housing, environmental sanitation, water supply and others, is there a plan to implement an integrated Basic Service Programme, on the lines of the Urban Basic Services attempted jointly by the Government of India, the UNICEF and three Corporation Municipalities - Hyderabad, Visakhapatnam and Calcutta?[14]

(A detailed case study of Visakhapatnam has shown, how integrating the engineering, health, community organization and socio-economic components, both administratively and functionwise under one department, the Urban Community Development Department, of the Municipal Corporation, resulted in mobilization of community participation for all programmes without duplication of efforts by each department)[14].

30. In most of the major urban cities there are large medical college hospitals with Departments of Preventive and Social Medicine. (There are 126 or more colleges in India today). In the case of Visakhapatnam Slum Improvement

Project, the inputs of the P & SM Department of the Medical College resulted in almost 90% immunization coverage in the slums and several other benefits[14]. There is an urgent need to study the managerial and organizational aspects of such projects to formulate a feasible scheme to effectively tap the superior public health skills of these apex institutions to meet the challenge of "Coverage" for primary health care in the urban slum situation.

31. It was found in urban Bangalore during the census of 1981 that about 30% of the work force were engaged in the domestic industries and services sector, and another 16% in the construction labour and related areas[24]. Considering the job insecurity and low remuneration, most would be living either in slums or in slum like poor conditions. Many are working in hazardous conditions, working closely with chemicals and plastics. In most cities, substantial proportion of the workforce would be working in similar small establishments. What comprehensive strategy can be devised so that the health of these workers in the informal sector both industrial and small scale or household industrial workers can be taken care of, possibly including the employers in the scheme?

32. We are seeing rapidly increasing trends of accidents in urban slums, not only road accidents but domestic accidents due to fire hazards in small, inadequately ventilated slum houses, accidental poisoning of children due to lack of adequate space to store dangerous drugs and chemicals, etc[18]. Thus accident and emergency care services and hospital beds for this purpose though quite expensive have to be developed adequately to cater to the needs. This brings us to the question, should we continue to plan for bed expansion keeping in view the current estimates of costs of maintaining hospital beds or should we examine innovative strategies employed by the voluntary sector to bring down cost of hospital bed maintenance, and see how best we can adopt these in the government sector? A study conducted on this aspect has revealed that some voluntary hospitals have been able to run their hospitals at a cost of Rs. 74/- per bed per day compared with the daily bed cost of Rs.190/- per bed per day in a government hospital[27].

33. A large number of private practitioners are practising in urban areas. It has been found in umpteen studies that a substantial proportion of slum population is approaching private practitioners for curative services. How can we effectively mobilize the efforts of private practitioners to deliver preventive and promotive services to their clientele, and thus indirectly contribute to the health of the community at large?

34. In addition, considering that the urban health services planned to be provided in the VIII plan period are on the lines of the rural primary health care infrastructure, the problems, issues and recommendations discussed under section II, with regard to operationlising the rural health infrastructure, also need to be seriously addressed in the context of urban health infrastructure.

Table I

Developments in Health Sector

(Pre-Independent India to India in the year 1989)

	1946	1989
1. Population Served	342 million	776 million
2. Health manpower (population per unit)		
a. Doctors available	1:6,300	1:2,680
b. Nurses	1:43,000	1:4,500
c. Health visitor	1:4,00,000	1:30,000
d. Midwife	1:60,000	—
e. Trained Dais	Nil	5.64 lakh trained since 1974
3. Beds available/ 1000 population	0.24	0.59
4. Health and Family Welfare Indicators		
a. Crude Death Rate	44	11.7
b. Crude Birth Rate	46 (1941)	32
c. Infant Mortality Rate	162/1000	96
d. Maternal Mortality Rate	20/1000	3 - 4
e. Couple Protection Rate	Nil	40%
f. Life Expectancy at birth	32	58
5. Control of Communicable Diseases		
a. Small Pox	Very High	Eradicated
b. Malaria	75 millions	16,63,284
c. Plague	very high	virtually nil

Sources:

1. *Bhore Committee Report (1946)*
2. *Statement of National Health Policy Government of India (1983)*
3. *Health Information India (1988)*
4. *India's Population - Policies and Perspectives, Planning Commission, Government of India, May 1989.*
5. *Annual Report 1988-89, Ministry of Health and Family Welfare, Government of India*

Table II

Results of Primary Health Care Services - Current Levels of Health and Family Welfare Indicators Vis-a-Vis HFA Goals

Indicator	Current Level	HFA Goal by 2000
1. Crude Death Rate	11.7 (1986)	9
2. Crude Birth Rate	32 (1987-88)	21
3. Net Reproduction rate	1.48 (1981)	1
4. Infant Mortality Rate	96 (1986)	below 60
5. Maternal Mortality Rate	3-4	<2
6. Pre-school Child Mortality	20-24	10
7. Low birth weight babies (<2500 gm) % of live births	25	10
8. Effective Couple Protection Rate %	40	60

Sources:

1. Statement of National Health Policy, Government of India 1983

2. Health Information of India (1988)

3. India's Population-Policies and Perspectives, Planning Commission, Government of India, May 1989

4. Annual Report 1989-90, Ministry of Health and Family Welfare, Government of India

Table III

Health and Family Welfare Indicators Prior to and Following the Alma Ata Declaration

Indicator	Prior to Alma-Ata Declaration	Current level 10-12 years following Alma Ata Declaration
1. Crude Death Rate	15 (1976)	11.7 (1986)
2. Crude Birth Rate	37 (1971-81)	32 (1987-88)
3. Net Reproduction Rate	1.48 (1981)	1.34 (1985)
4. Infant Mortality Rate	125 (1978)	96 (1986)
5. Maternal Mortality Rate	4-5 (1976)	3-4 (1985)
6. Pre-School Child Mortality	24 (1976-77)	20-24 (1985)
7. Low Birth Weight Babies (%)	30 (1976)	25
8. Effective Couple Protection	23% (1976-77)	40% (1988)
9. Incidence Cases of Malaria	64,67,215 (1976)	16,63,284(1987)
10. TB Case detection	450 sputum positive cases	750 cases approximately

Sources:

1. Statement of National Health Policy, Government of India 1983
2. Health Information of India (1988)
3. India's Population - Policies and Perspectives Planning Commission, Government of India, May 1989
4. Annual Report 1988-89 Ministry of Health and Family Welfare, Government of India

Table IV

Availability of Health Infrastructure

Category	Total Units required by 31.3.1990	Units set up till 30.6.1989
Subcentres	1,30,000	1,21,776
Primary Health Centres	21,666	19,169
Community Health Centres	2,708	1,663
No. of trained health guides	5,00,000	3,88,382
No. of trained dais	5,72,000	5,85,578

Sources:

1. Health Care Delivery Services in Rural and Urban Areas - Policies and Perspectives, VIII Five Year Plan Working Group Report of the Planning Commission June, 1989. p.5

2. Rural Health Statistics-India, Rural Health Division, DGHS, New Delhi, June 1989.

Table V

All India Trends in Urbanization 1941-81

Census Year	Population			Average annual growth rate (percent)		Growth in urban population	Transfer from rural areas	
	Total (000s)	Urban (000s)	Percent urban	Total	Urban	(000s)	(000s)	as %of growth
1941	309,019	43,559	14.10	-	-	-	-	
1951	349,805	61,630	17.62	1.24	3.47	18,071		39
1961	424,836	77,562	11.30	1.94		22,044	8,706	39
1971	520,918	106,966	20.22	2.19	3.21	29,404	10,402	35
1981	658,141	156,188	23.73	2.19	3.78	49,222	23,088	47

Note: Assam and Jammu & Kashmir are excluded from this table

Source: *Padmanabha, P. Provisional Population Totals, Rural-Urban Distribution Paper, 2 of 1981, Series 1, New Delhi, Office of the Registrar General, 1981.*

Table VI

Estimated Number and Proportion of Slum Dwellers in the Cities of Various Sizes in 1981

Population Size Class of Cities	Number in 1981	Urban Popn. in millions	% of Slum Popn. in Urban area
More than 10 lakh	12	42.02	30.78
5 - 10 lakh	29	19.36	20.58
3 - 5 lakh	30	10.90	17.74
1 - 3 lakh	150	23.46	18.12
50,000 - 1 lakh	275	18.55	12.16
less than 50,000	2666	45.09	10.04

Source:

National Buildings Organization Hand Book of Housing Statistics 1981, New Delhi pp 32 (as quoted in Shiva Ramu S. Health and Basic Amenities for the Urban Poor in "On Growing Needs of Urban Health Management" 1986, Ashok Sahni, Ed. Indian Society of Health Administrators, Bangalore).

Table VII

Indicator	All India rate	Rate		Rate in Urban Slums/ Remaks
		Rural areas	Urban areas	
1	2	3	4	5
1. Infant Mortality Rate	96[10]	105	62	221[18] in Delhi slums 440 (approx.) in lower caste slums[18].
2. *Child Health Indicators*				
a. Tetanus (neonatal)		13.3/1000[17]	3.2/1000[17]	50% of infant deaths in slums are due to prematurity and tetanus[17]
b. Polio as a cause of paralysis		28%[17]	44%[17]	Immunization coverage for polio is only 11% in Urban areas[17].

3. *Nutrition Indicators*				
a. Iron deficiency anemia in children				60% of the children[18].
b. Protein Energy malnutrition in		19%[20]		50% show malnutrition and 10% severe mal-nutrition[18].
4. Incidence of TB	0.13/1000	0.13/1000	0.13/1000[19]	Found to be 10 times[18] the incidence in a non-slum area One in ten suffering from TB in a slum population of Bombay[25].
5. Prevalence of Diarrhoea				19% in the Bombay study[25].

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Appendix - I

Seventh Plan Outlays on Health and Family Welfare

S.No.	Programme		Total (Rs.in crores)
	HEALTH		
1	Minimum Needs Programme/Rural Health	..	1096.35
2	Control of Communicable Diseases	..	1012.67
3	Hospitals and Dispensaries	}	
4	Medical Education and Training	}	
5	ICMR	} ..	1283.87
6	Indian Systems of Medicine & Homeopathy		
7	ESI	}	
8	Other Programmes	}	
	Total	..	3392.89
	FAMILY WELFARE	..	3256.26

Source: *Planning Commission, Government of India*

5. Health Care for Urban Slums with Special Reference to Bangalore City

J. S. Saksena & P. N. Govindarajulu***

I. Introduction

Health Care of the Urban Slums needs special and urgent attention for the following reasons:

(i) Slum dwellers have the worst of both the worlds - urban and rural. On one side, they suffer from economic hardships, lack of education and absence of health infrastructure like the rural population. On the other hand, they also suffer the illeffects of overcrowding, pollution and rootlessness characteristic of large metropolitan cities.

(ii) The magnitude of the problem will progressively increase with the passage of time. It is observed that while the populations of the countries are doubling every 25 to 30 years, their large cities are doubling every 10 to 15 years, and the urban slums and shanty towns in these cities double every 5 to 7 years. Bangalore, which had a slum population of 7.3 lakhs out of total population of 29 lakhs in 1981 (about 25%) is estimated to have 13 lakhs slum-dwellers out of a total population of 43 lakhs at the end of 1988 (about 30%).

(iii) A basic health infrastructure howsoever inadequate has developed in the rural areas in the form of P.H.C.S., subcentres etc. Nothing of the sort exists in the urban slums. The hospitals in general are de-facto out of reach for them as they can spare neither the time and money, nor do the slum dwellers have the social, educational or political clout to meaningfully avail their services.

(iv) Most comforts and conveniences of the cities are sustained by the work done by slum dwellers. As such, the affluent and the privileged have the moral responsibility to try to mitigate and alleviate their suffering. Rural population may be ignorant of the 'goodies' they are missing, but a slum dweller is painfully aware of the privations suffered by him due to his constantly rubbing shoulders with urban affluence and conspicuous consumption, with resultant frustration and resentment.

II. Problems of Organizing Health Care for Urban Slums

The special problems of organizing Health Care in Slums are as follows:

a) Economic - out of 34.2% of persons in Bangalore slums who are engaged in some sort of economic activity or the other, 62.1% are unskilled labourers working as daily casual labourers. The economic profile is more like Calcutta than Bombay.

b) Social evils such as alcoholism, drug-abuse, drug-peddling and drug-push-

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ing - rootlessness and lack of organized family support and controls. It may be noted that 85% of slum dwellers in Karnataka are non-kannadigas.

c) Lawlessness aggravated by slum-lords and their henchmen, ignored if not actually abetted by the police and political workers. Cases of extortion, bullying, physical assaults, harassment and molestation and even rape and murders are too well known to need any further elaboration.

III. Disease Profile of Urban Slums

At a conservative estimate, illness in slums is 30 - 50% more as compared with the rest of the city. Many of the diseases which grab news headlines when they break out of the confines of the slums are more or less chronically endemic in the slums. Add to these the ravages due to

(i) worm infestations and diarrhoeas
(ii) skin diseases
(iii) gross malnutrition both chronic and acute
(iv) poly-vitamin deficiency and iron deficiency anaemia
(v) repeated pregnancies and abortion under unhygienic conditions by un qualified persons
(vi) prostitution, pimping and sexually transmitted diseases.

The vicious cycle of poverty, ignorance, ill-health and social degradation is self perpetuating.

IV. Present Policies and Programmes for Slum Dwellers

A. Government Programmes for Slum-dwellers

(a) Slum Clearance: It was emphasized in Second and Third Five Year Plans, but not much headway was made due to magnitude of the problem and lack of political will and community commitment.

(b) Environmental Improvement of Urban Slums (E.I.U.S.): Introduced in 1972, this includes water supply - one tap for 150 people, sewers and storm water drains to end water stagnation, community baths (one bath for 20 to 25 people), latrines (one for 20 to 25 people), street lighting (one pole 30 metres apart) and widening and paving of roads in statutorily notified slums. The estimated per capita expenditure for this was Rs.300/-. In 1974, this programme was included in Minimum Needs Programme, and in 1982 the scheme was incorporated in the revised 20 Point Programme. The Eighth Plan provision for this programme is Rs.151.45 crores to cover 10 million slum-dwellers.

(c) Corporation authorities in Bangalore are looking after sanitation and universal immunization programme in corporation slums only. Malaria surveillance is done by District Health and F.W. Officer of Bangalore Urban District.

B. Role of the Slum Clearance Board

With the intention of improving the unhygienic and insanitary conditions prevailing in many parts of the state, the Karnataka Government enacted the Karnataka Slum Clearance and Improvement Act of 1974 which came into existence in the state from the 7th day of October 1974 and the Board was

constituted during July 1975. More than half the identified urban slums in the state are in Bangalore.

An important activity of Slum Clearance Board is to provide housing for economically weaker sections (E.W.S.Houses). E. W. S. Houses are to be funded 80% from HUDCO and 20% out of state funds. They are to be allotted to identified slum dwellers on a lease-cum-sale basis at a subsidised rate of interest. The problems however are:

(i) Paucity of suitable land and funds
(ii) E. W. S. houses are far from the area of economic activity and sentimental attachments of the slum dwellers.
(iii) Monthly instalments are beyond their economic capacity.
(iv) Even if implemented, it will touch only the fringe of the problem. The increase in number of slum dwellers will be much more than those whose lot is ameliorated. Other activities of the Board include SULABH SOUCHA LAYAS, supply of drinking water etc., as already indicated earlier.

V. Suggested Strategy for Health Care of Slums

Government programmes are often inadequate and poorly implemented. Therefore there is need to combine Governmental resources with private initiative and dynamism. Voluntary organizations, service clubs, philanthropy and co-operative effort can all play an important role.

A health care strategy involving three tiers of organizations working in co-ordination is discussed, viz.,

1. A large organization with ample health care resources viz., drugs and equipment, health manpower like doctors, nurses, interns and students and back-up resources for referral and follow-up. These include teaching hospitals, Government and Municipal hospitals and private hospitals.

2. Voluntary organizations, for providing funds, volunteers for logistics, public relations and rapport with the community served, for example, Rotary Clubs, Mahabodhi Society, Sumangali Seva Ashram, Bangalore, etc.

3. Local group or society - to involve slum residents in their own health care, to provide grass roots support, identify cases needing urgent care and to break the initial resistance, inhibitions and cynicism of the slum dwellers in availing the services offered. This tier should be painstakingly nurtured, supported and sustained to play a progressively more important role in days to come.

Three representative programmes are in action in Bangalore.

1. Amarjyothi Layout and Cholanayakanahalli Slums, in association with M. S. Ramaiah Medical College and Sumangali Seva Ashram.

2. K. G. Bydarahalli Slum in association with Rotary Club of Bangalore and nursing homes of rotarians and some staff members of St. John's Medical College and Corporation staff.

3. Siddapur Slum, in association with Rotary Club of Bangalore. Mid-town and Mahaboodhi Society.

PH-HD
11980 NIHU

It may be noted that an essential "Must" for the success of these programme is to create a nucleus of devoted slum dwellers and involve them in their welfare and well-being to provide grassroot support, local acceptance and distribution of information and what is most important, ensure the continuation of programme and prevent it becoming a nine-day wonder only to temporarily boost the ego of elitist urban socialites and social workers. These grass root voluntary bodies of slum inhabitants can be sustained only if they are given a multipurpose orientation including social, cultural, educational and other service activities and not circumscribed and isolated in health work only.

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6. Spatial Accessibility to Health Care in Rural Areas

*Girish K. Misra**

I. Introduction

In our country the pendulum of regional planning often surges back and forth. As one looks back on the efforts put in to develop rural areas, one finds very many changes taking place in the concepts, methodologies and policies adopted for plan making at that level. The present paper is one more attempt in that direction where current theory and practice of regional development are studied in the context of the prime objective, i.e. welfare of the rural poor, through the principles of equity and efficiency.

Social facilities are to be planned according to the principle of spatial equity, to ensure accessibility of the facilities to the rural poor on an equal footing with the rest of the society. While doing so, another principle, efficiency must also be considered along with the principle of equity.

Equity is expressed in terms of a minimum access standard which facility location must satisfy Vis-a-vis consumer goods, whereas efficiency is measured in terms of the minimum number of locations required for the facility such that the

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equity criterion is satisfied. Spatial planning is thus an egalitarian approach where a hierarchical system of settlements is designed for the provision of services for integrating various sectors of the economy based on the principles of equity and efficiency.

Following criteria are adopted for locating social facilities:

(i) Aggregate Distance Minimisation: A commonly used criterion is to locate a given number of centres such that the aggregate distance of potential users from their closest available facility is the least. The rationale for using this criterion in planning facilities is that minimizing average distance is equivalent to minimizing the cost to users of travelling to the facility.

The P-Median problem is formulated after ReVelle, Marks and Liebman.[1]

(ii) Minimising the Maximum Distance: A second frequently used criterion is to locate facilities such that the farthest village is within a certain distance from a facility. This criterion is not an average; rather interest is focussed on finding a set of locations such that distance from the farthest village is minimized (i.e. MINI-MAX).

(iii) Minimizing Aggregate Travel Distance Within a Maximum Distance Constraint: The two criteria just described can be considered as two extreme cases. The first defines at best a system where welfare for the entire area is increased in terms of distance minimisation, whereas in the second, the most disadvantaged person is located in the best possible location. A compromise definition is often advocated in which the average levels of access is maintained as high as possible provided the farthest person is no farther than a given distance.

II. A Case Study of Optimizing the Location of Health Services in a Block

1. Study Area

The study is set in Ranaghat-II Block of Nadia District in West Bengal.

The block has a total geographical area of 275 sq. km. of which the entire area is rural. The total population of the block was 2,11,134 according to the 1981 census, the density of population being 734 persons per sq. km. At present the block consists of 116 mouzas or revenue villages including five uninhabited villages.

2. Present Health Delivery System

There are four sub-health centres (SHC) and one Primary Health Centre (PHC) in the block (Figure 1). The PHC is located in Saboalour and the four SHCs are located in Dattapulie, Purba Noapura, Gangnapur and Gangsara. Each SHC covers an area of 3 to 4 anchals or roughly 20 to 30 villages with an approximate population of nearly 25,000 which is much higher than the 10,000 population. Besides there has not been any additional health facility established in the block since 1968 except that one more SHC in Gangsara was added in 1976. On the other hand the PHC which was 10 bedded in 1962 was expanded to 15 beds in 1968. It has a Family Welfare and Public Health Nurse, one Malaria Inspector, 4

Family Welfare Field Workers and 6 Multipurpose Workers.

Among the four SHCs, three located at Dattapulie, Gangnapur and Gangsara are in good working condition. The SHC located at Purba Noapura is virtually non-functional. For months together it is deprived of a medical officer which affects its functioning drastically.

3. Proposed Locations of Health Facilities

Considering the budgetary constraint as discussed with the concerned Health Department, it is not realistic to locate more than two PHCs and 12 SHCs in the block. Thus, it is proposed to upgrade the existing two SHCs to PHCs at Dattapulie and Aranghate-Narayanpur. According to the Government norm, It was to be ensured that there was no dispensary located within 8 km. range from the proposed location of PHC.

On the other hand, the optimal location of 12 SHCs was obtained by constraining the existing location of 4 SHCs and PHC. In this regard the maximum and average distances given by ALLOC VI were 5.5 km. and 1.8 km. respectively (Figure 1).

Besides minimizing the aggregate travel distance in the above manner, an attempt was also made to obtain the MINIMAX problem. In this manner the maximum and average distances arrived at were 6.0 km. and 2.1 km. respectively.

III. Conclusions

The provision of public services such as education and health services in rural areas, and upgrading the standard of these facilities to the level of urban centres, remains one of the most challenging problems to most developing countries. Locating public facilities in rural areas is an expensive venture because of the relatively sparse distribution of population. Yet bringing these services to the rural areas is a major force in rural transformation. How this is to be accomplished is a subject of major debate; whether the goal should be greater equity in the distribution of services, or greater efficiency in the use of existing resources. Equity as a goal for planning requires more resources.

In the last resort, it is effective use of the service by the population at large that justifies the allocation of resources. Consequently, considerations of efficiency, which takes into account both the provision and utilization of facilities, would in the long run, prove more beneficial to people in rural areas.

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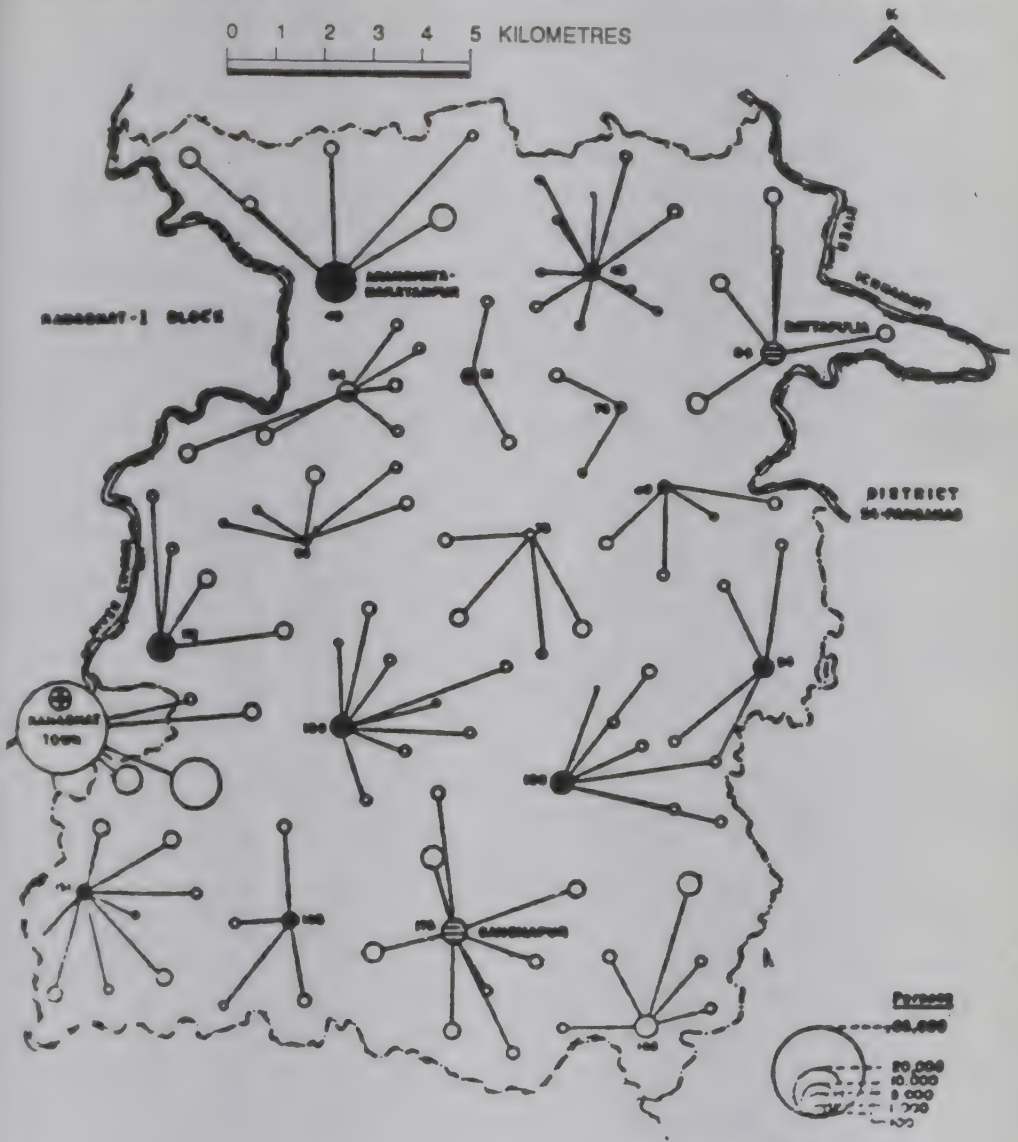
RANAGHAT - II BLOCK
OPTIMAL LOCATION OF LKPROPOSED HEALTH FACILITIES



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Hospital	..	⊕
Existing Sub-health Centre	..	○
Proposed Sub-health Centre	..	◕
Existing Primary Health Centre	..	◒
Proposed upgradation of Primary Health Centre from Sub-health Centre	..	⊖
Maximum Distance	..	5.3 k.m.
Average Distance	..	1.8 k.m.

POLICE STATION CHAKDAM
(DISTRICT NADIA)

NOTE: LOCATION OF CENTRES IS INDICATED BY VILLAGE CODE NUMBERS

Fig. 1

7. Current Status of Health in Rural India - An Overview (Abstract)

M. A. Khan and M. Yunus***

According to the 1981 census 73% of India's population lived in rural areas. Thus they not only constitute the majority of the country's population but also have the lion's share of all its diseases and health problems which are too large to enumerate. It is an irony that despite their large number and essential needs the majority of the rural masses remain deprived of proper medical and health care. The country has no doubt made notable achievements in the health sector but they still fall short of rural health needs and expectations. This situation is because India occupies the number one position in the world as regards various health problems.

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IV. INNOVATIVE / ALTERNATIVE APPROACHES - SUCCESSFUL AND NON-SUCCESSFUL

8. Alternative and Innovative Approaches for Health Care in Relation to Health for All by 2000 A.D.

*R. K. Das**

The following is a brief account of community organization, health and developmental work undertaken by the Lutheran World Services (India) in a squatter's colony of Calcutta.

I. Introduction

Biplabi Kshudiram Pally is a squatter's colony in North East Calcutta (Ultadanga) in Ward No.14 of Calcutta Municipal Corporation area. The origins of this colony goes back to 323 families from the erstwhile East Pakistan (now Bangladesh) who took refuge on the railway platform of Ultadanga Station during the years 1969-71. When they were evicted from the platform they forcibly occupied 1.71 sq. km. of marshy land adjoining the western side of the railway embankment near the station.

Tired of being repeatedly hounded out, they occupied their present location where they constructed temporary makeshift huts occupying a floor space of roughly 16 sq. feet per person. The area was packed with such houses, with no roads and drainage systems. They were devoid of potable water and lacked proper sanitation facilities. All pervading toxic fumes from the neighbouring acid factories compounded the situation further. Moreover, unemployment and underemployment and lack of health facilities added to the misery, and widespread disease and ill health was prevalent. This was the prevailing scenario when Lutheran World Service (India), an international voluntary agency engaged in social development, moved into the area in 1979 to assist the community in improving their quality of life.

II. The Community Development and Health Programme of the LWS - I

Initially LWS (I) provided extension services such as vocational training, economic programmes and non-formal education from its Ultadanga Project. Health activities also started in a small way, confined to running out-patient curative services only.

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The concept of on-site development was reinforced in 1986 and LWS took it up as a project site with inputs centring around health, education, income generation, women's development and infrastructural programmes based on housing, sanitation and drinking water.

A community health survey was indeed necessary to reassess needs and it was undertaken by the community with the LWS guidance. The results were compiled and analysed together by the people, and LWS. The people perceived the real needs, and priorities emerged. Plans and programmes were evolved through the consultative and participatory approach with roles of the people and LWS chalked out. Initially the community health work was being carried out from a residential hut provided by the community. In 1986 after land was reclaimed by pond filling, a separate hutment was constructed to continue the health activities. Women eagerly came forward to participate actively in the health programme and two volunteers were selected from among them to become future community health workers. Six community latrines in 1984 and 21 family latrines in 1989 were constructed by Sulabh International and are being properly maintained by the people. Fourteen covered garbage bins provided by LWS (I) are not only being well maintained by the community but arrangement for disposal of the garbage to the nearest municipal dump is also carried out by them.

People's morale received a boost when in 1988 they were able to gain legal ownership of the land with assistance from the Government of West Bengal after a prolonged period of struggle with the original owners. Town planners then drew up the blueprint for construction and realignment of the houses and other infrastructure. Significantly, the plan was modified after consultation with the people. Different governmental agencies such as HUDCO and CMDA were mobilized by the people for resources. The health scene has improved considerably and at the close of 1989 some of the major highlights are:

a) Under-6 children

DPT 3rd dose coverage	..	91% (90.76%)
Polio coverage	..	92% (91.79%)
Grade II and II Malnutrition Cases	..	20% (20.24%)
Female	..	25.3%
Male	..	15%

b) Of 261 eligible couples 72.4% practice family planning methods:

Method	*No. of Couples*	*Percentage*
Pill users	51 E.C.	27.13%
Cu 'T' users	7 E.C.	3.72%
Tubectomy	121 E.C.	64.36%
Vasectomy	9 E.C.	4.79%

At present the community health workers carry out the various functions such as immunization, antenatal care, growth monitoring and all record keeping and the role of LWS is supervisory in nature. Health funds have gradually grown through the years and the community has planned an annual subscription from all the constituent families. A new community centre which shall also house the health services is coming up.

The stage is now set for LWS to withdraw from the area while people take

over and sustain the development process.

III. Conclusion

Experience has led us to believe that the people should not be recipients but they should become partners in the development programmes. In other projects of LWS-I situated in the remote rural areas of many districts, efforts in the same direction have yielded fruitful results. For example in the Traditional Birth Attendants Training, no stipends are given but the TBAS gladly participate almost without any dropout. The realization has dawned that any development programme designed for the users must involve the users right from the planning stage. If development is meant for the people then it should be of the people and by the people.

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9. Primary Health Care Programme in an Urban Slum of Bombay

*Gopa Kothari**

Introduction

Dharavi Slum in Bombay with a population of 4,00,000 is the largest slum in Asia and the most congested and unhygienic squatter's colony in a land area of sq. mile. It is constituted by young men and women from all over the country who came to Bombay in search of employment at the age of 20 - 25.

The health status of children and women in urban slums is appalling. Dhavari slum was in no way different. The grim situation could be greatly improved and the major causes of mortality prevented through well targeted maternal and child health interventions.

Recognizing the above facts, the Department of Preventive and Social Medicine conceptualised a community based approach in 1981 to meet the priority health needs of children and women in a densely populated low income area of Dharavi Slum covering a total population of 35,000 residents.

Project Design and Strategy

Urban primary health care programme was designed principally as a community based health care programme for provision of targeted PHC services with the objective of reducing high neonatal, infant and child mortality rates and improving the health and nutritional status of under-five children and health of women in the reproductive age group i.e. 15 - 45 years.

The programme applied six basic strategies:

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i. Establishing an urban community-based health care infrastructure .

ii. Developing women as the principal community health action agents, including the training of community health workers and traditional birth attendants.

iii. Applying new community based and home based health technologies to meet priority health problems.

iv. Integrating community health services, emphasizing disease prevention and health promotion for women and children.

v. Developing a simplified information system appropriate for community based health care and;

vi. Exploring methods for local financing of urban community based health care

III. Goals and Objectives

The specific objectives of the project were;

i. To increase the availability, accessibility and acceptability of selected primary health care services, specifically for women and children.

ii. To increase community awareness of priority health problems and their causes, and to establish community participation in disease prevention and health promotion programmes.

iii. To improve environmental health conditions principally through community participation and self efforts.

iv. To reduce infant and child morbidity and mortality.

v. To reduce birth rate by acceptance of small family norm.

vi. To reduce malnutrition among children and women principally through nutrition education activities.

vii. To reduce maternal morbidity and mortality.

viii. To improve the knowledge regarding child care in mothers.

ix. To increase family and community income through various innovative family and community projects.

IV. Key Features of the Project

It was decided to develop a community based health care system mainly through mobilization, training and support of community health workers and traditional birth attendants; involvement of community leaders and mobilization of other community resources. Community dialogue, motivation and education were considered to be ongoing activities of the project. Once maternal and child health services are established, other components of a comprehensive PHC programme could be added to the community based health care system.

The emphasis was on five principal interventions which can most cost effectively and dramatically improve maternal and child health.

1. Prenatal, perinatal and postnatal care of mothers and care of infants.
2. Promotion of breast feeding and better weaning practices.
3. Immunization.

4. Growth monitoring and nutrition education.

5. Promotion of oral rehydration therapy and education to mothers on preparation of home based ORS.

V. Project Planning

1. In the first year of project implementation (1981) the focus was on community dialogue, identification of community health workers with the help of community leaders, training of community health workers, planning for comprehensive baseline health survey and planning details for project monitoring and evaluation.

2. In the second year, the activities included, continued dialogue with the communities, training of traditional birth attendants and training of other groups, launching of service programmes, development of health education material and annual review of activity.

3. In the third year, the activities included continued dialogue with the communities, refresher training for CHWS and TBAs, continuation of service programme, annual review of the progress of the project following systematic internal evaluation, and development of income generating schemes.

4. In fourth year, the activities included continuation of community dialogue, refresher training programme, continuation of service programmes and annual review of the project progress. It also included involving local NGOs for technical support and involvement of the community for its contribution towards recurrent costs.

5. In the sixth year, gradual phasing out of activities and expansion of the system to new areas was planned.

The project staff consisted of 3 doctors, 3 community organisers (medical-social workers), 1 public health nurse, 12 community health workers and 1 bio. statistician.

VI. Project Information, Monitoring and Evaluation

The major evaluation objective is to measure the change in infant and child mortality and malnutrition, decline in birth rate and changes in maternal mortality. Some of the specific indicators evaluated were:

1. Changes in utilization of health services
2. Impact on the health status of children and women
3. Impact of health education on the knowledge and practices in women with respect to child care.

VII. Results

The integrated primary health care approach has achieved tangible results over the past six years.

1. *Community Process*: The community process is going on well. The project has demonstrated meaningful community participation.

2. *Community Awareness on Health Problems*: Case finding and case holding

in cases of tuberculosis and leprosy has improved. Voluntary reporting of cases is showing a definite increase. Thus it has led to better utilization of existing health services and increased awareness in people.

3. *Maternal Knowledge about Child Care:* The knowledge regarding child care has shown remarkable change (Table 1). Periodical home visits by the staff has also witnessed a change in practices regarding child care.

4. *Infant and Child Mortality has Declined* (Table 2): Although the morbidity pattern has remained almost the same the number of spells of diseases like diarrhoea has decreased and there is decrease in communicable diseases (vaccine preventable diseases). The immunization coverage has markedly improved (Table 3). There has been an improvement in the nutritional status of children (Table 4) and in the control of the problem of xerophthalmia in children (Table 5).

5. *Maternal Morbidity and Mortality:* There has not been much change in the morbidity pattern in women but there has been a decline in the prevalence of anaemia. More women are utilising the existing health services at the centre.

6. *Family Welfare Services and Birth Rate*: There has been considerable increase in utilisation of conventional contraceptives and oral pills. There has also been an increase in the acceptance of terminal methods of contraception. These have led to a decline in crude birth rate. (Table 2).

VIII. Conclusions

This project has proved that an integrated community-based approach with primary health care as the model can bear fruitful results. The heartening outcome of the project is that people have become conscious about health and health-related matters and more motivated to take measures both at the individual and community level to prevent sickness. It has also created a demand for training programmes for CHWs and TBAs and led to establishment of more adult literacy classes, income generating schemes, Balwadis (nursery classes), and development of better housing facilities.

IX. Future Plans

This programme has led the way to the implementation of similar programmes in several other slum areas. The evaluation of the programme has helped the team in adopting several changes in the programme methodology, like better planning, innovative methods for training and ongoing education, and effective approaches for ensuring community support and participation.

Table - 1

Maternal Knowledge Regarding Child Care
(in percentage)

	1981	1982	1983	1984	1985	1986	1987	1988
Breast Feeding	60	75	86	90	95	95	96	97
Weaning	05	55	70	80	90	90	92	93
Immunization								
(a) B.C.G	10	45	70	85	90	90	92	92
(b) Triple	50	78	90	95	97	98	99	99
(c) Polio	60	78	90	95	97	98	99	99
(d) Measles	—	15	30	40	60	60	65	68
Vit.A Prophylaxis	—	60	70	85	98	98	98	98
Oral Rehydration	—	55	65	75	85	85	85	85
Care during illness	05	50	60	65	80	80	85	85
Personal hygiene	12	35	50	60	80	80	82	82

Table - 2

Vital Statistics in Project Area

Year	Mid year population	Birth rate (CBR)	Death rate (CDR)	Infant mortality (IMR)	1 - 5 yrs. mortality rate	Maternal mortality (MMR)
1981	35,000	58.68	11.43	68.15	16.40	5.84
1982	35,000	52.46	10.90	66.99	13.40	5.44
1983	34,000	49.06	10.30	66.54	12.80	4.19
1984	33,000	35.28	10.46	66.15	13.21	4.29
1985	33,000	27.69	9.72	68.92	7.03	4.37
1986	33,000	24.03	9.80	65.57	3.09	3.78
1987	33,000	22.84	9.54	54.37	1.41	6.63
1988	31,000	18.19	8.42	51.41	6.20	Nil

Table - 3

Immunization Coverage in Underfive Population
(in percentage)

	1981	1982	1983	1984	1985	1986	1987	1988
BCG	40.26	61.08	72.52	80.59	85.59	90.20	91.00	91.90
Triple & Polio								
Primary I	49.20	70.03	86.01	92.40	93.40	93.00	93.20	94.00
II	37.79	69.29	82.03	88.08	90.08	91.88	92.00	93.10
III	28.40	72.40	81.02	84.82	88.88	90.88	91.00	90.00
Booster B1	02.80	22.70	31.00	32.00	34.00	34.00	35.00	36.10
Booster B2	-	17.20	30.00	30.81	30.91	31.80	32.00	33.00
Measles	00.76	35.23	48.30	49.55	51.55	52.50	53.00	55.70

Table - 4

Nutritional Status of Underfive Children (in percentage)

Nutritional Status	1981	1982	1983	1984	1985	1986	1987	1988
Normal	27.12	29.73	30.34	39.00	44.70	50.25	50.50	50.60
Malnourished								
*Grade I	37.80	36.37	37.77	34.37	32.22	30.20	30.10	30.15
II	26.20	25.85	25.02	23.58	20.47	18.05	17.90	17.95
III	08.88	8.05	06.87	03.05	02.61	01.50	01.50	01.3

**Grade I - 80% of exp. wt., Grade II - 70% of exp. wt., Grade III - 60% of exp. wt.*

Table - 5

Xerostatistics of Underfive Children

Eye Signs	1981	1982	1983	1984	1985	1986	1987	1988
Conjunctival Xerosis (XIA)	207	-	-	-	-	-	-	-
Night Blindness (XN)	18	8	-	-	-	-	-	-
Bitot Spots (XIB)	54	42	13	2	-	-	-	-
Corneal scar	9	9	5*	5*	1*	1*	-	-

**Children have crossed the age of 5*

10. Health Care for Urban Poor - an Intersectoral Approach

S. P. Mukhopadhyay and K. K. Das***

I. Introduction

It is now well known to professionals and people that health of a community may not be achieved only through rendering medical services. It hinges heavily on the income group to which they belong and the environment they live in. To ensure health for all by 2000 A.D. it has to be ensured that people must get adequate nutrition, basic education, better income and healthy environment (1,2,3). An endeavour is being made through Urban Health Centre, Chetla (UHC, Chetla) to render these health related services so that health for the people of Chetla may be achieved. Thus UHC, Chetla practices the principle of organization and delivery of health care services through intersectoral co-ordination.

The Urban Health Centre, Chetla was founded in 1955 as a result of a tripartite agreement between the Government of India, Government of West Bengal and the Corporation of Calcutta. The cost was borne by the Government of India and United Nation's International Children's Emergency Fund and the required land was provided by the Government of West Bengal. The Health Centre thus founded has been designed to cater to the needs of health care specially for the poor and the slum dwellers of that area.

Broadly speaking this health centre has three objectives - teaching and training, research and delivery of community-based comprehensive health services.

II. Area Characteristics and Community Profile

The service area of this health centre is located in Ward Nos.78, 85 (Part) and 86 of district IV of Calcutta Corporation with an area of about 2.2 Sq. Km. It is bounded on the North by Judge's Court Road, East by Tolly's Nullah, West by Diamond Harbour Road and South by Boat Canal. The characteristic features of this area include:

a. The population of this area belongs to divergent social and economic classes like richest of the rich and also poorest of the poor.

b. Has famous pilgrimage of Hindus viz., Kali Temple

c. Has the maximum number of slum dwellers so far as Calcutta Metropolitan City os concerned.

To identify every potential beneficiary, the Health Centre has developed a system of its own. It assigns a Central Statistical Registry (CSR) number to every household situated in the service area. A family folder for every beneficiary household is maintained which includes the health profile of the members of the households.

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According to the records of the Statistics Section of UHC, Chetla about 43.
percent of the households of the service area live in 'bustees' (slums) and ar
uses of UHC services (table 1 and 7). The remaining 56.2 percent households fa
in non-slum area of UHC, Chetla. Among the non-slum community about 26%
are graded as poor and users of UHC, and were nuclear families. The proportio
of nuclear families in slums was found to be 82.5 percent whereas in non-slum
areas it was 75.1% (Table 2). Coming to the age distribution of the community
about 30 percent of the people were below 15 years of age and about 13.
percent were above fifty years of age (Table 3). Regarding literacy, about one
fifth of the total male population (all age groups taken together) in the service are
were illiterates and one-third of the females were illiterate.

III. Services and Sectional Activities

Services

Health care is extended to the community through clinics run at the Healt
Centre and though regular home visits. An important feature of the health care o
fered by the centre is that it takes care of the members of the community fro
womb to tomb i.e. from pre-natal stage to death. Further, the health centr
provides preventive, curative and promotive services under one roof. Thoug
emergency cases are looked after, the emphasis is on preventive service
through special clinics viz. Mother and Child Health, School Health, Nutritio
Chest and Tuberculosis, Occupational Health, Epidemiology, Sexually Transmi
ted Diseases, Public Health Laboratory and Mental Health. Under the auspice
of the Social Welfare Department of the Centre and in collaboration with the Go
ernment of West Bengal, a small Charka Centre is being run in the premises
the Urban Health Centre, Chetla. Here wives and daughters of sick husbands
fathers work and earn about 7 to 8 rupees a day. On an average, thirtyfiv
workers work in this centre. It is planned to expand the Charka Centre
accommodate many more needy women.

Inspite of massive efforts, it has not been possible to ensure even prima
education for everybody in the country. Since health depends heavily on educa
tion, an attempt is made to extend primary education to the community. Within th
premises of the Urban Health Centre, Chetla an informal Nursery School is bei
run under the care of Social Welfare Department. It is a small non-form
education centre but significant to remove illiteracy from the future adult me
bers of the community.

The UHC, Chetla consists of the following sections/clinics:

1. Maternity and Child Health & Family Planning
2. Industrial Hygiene
3. Nutrition Clinic
4. Epidemiology Section
5. School Health Section
6. Health Education Section
7. T.B.Clinic
8. S.T.D.Clinic
9. Public Health Laboratory

10. Social Welfare Section
11. X-ray Clinic
12. Nursing Division
13. Statistics Section

In addition E.N.T., Dental and Mental Health Clinics are run on part time basis twice a week.

The function of the MCH and Family Welfare Section is spread in three directions towards mothers' health, child health and family welfare.

Maternal health activities include registration of pregnant woman in the community by nursing staff, follow-up weekly visits to watch the progress of the pregnant women, routine examination of blood and urine, regular check-ups like weight and blood pressure, distribution of folifer tablets, and immunization with tetanus toxoid to avoid tetanus neonatorum.

By child is meant those who are under five years of age. The section provides immunization against communicable diseases like tetanus, diphtheria, whooping cough, tuberculosis, poliomyelitis and measles. Care is taken to prevent Vitamin 'A' deficiency among children by giving them Vitamin A in oil. Administration of oral polio vaccine was started by the Health Centre in 1975.

In the field of family welfare, the section through its nursing staff motivates the eligible couples of the area to accept the 'suitable' methods to plan their families. Exhibitions and film shows are also used for this purpose. Oral pills, condoms etc. are distributed free to the people and in collaboration with local hospitals, tubal ligation and vasectomy operations are also performed on the acceptors.

Industrial Hygiene section of the Centre aims at providing medical care to the industrial workers employed in small industries located in the area which are not covered by the Employees State Insurance Scheme. It is also aimed to guide the management of those industries about the environment and sanitation at the place of work.

Malnourished children (between 0 - 5 years of age) are referred by MCH section and the Nutrition clinic provides special care to them. Other activities of this clinic include nutrition education and cooking demonstration to the community and follow-up at home.

Surveillance of diseases is done by the Epidemiology section by analysing the morbidity data. If needed, control measures are adopted by the section through the useful procedure of notification, isolation, immunization and disinfection. The following developments are followed up more thoroughly:

1. Report of large number of cases as compared to the corresponding period of last years
2. Sudden increase in the number of cases;
3. Reported cases in vaccinated children
4. Insignificant downward trend in the incidence of the diseases inspite of improved services.

Biweekly immunization clinic is run by this section. Effective cold chain is maintained to ensure that the vaccines are stored at recommended temperature till they are used. Bacteriological analysis of the water available at the campus of the Urban Health Centre, Chetla is done at the behest of the section and suitable measures are recommended periodically.

School Health section provides medical care to all 35 schools with eighteen thousand students on roll in the area. Special emphasis is given to the twelve primary schools in the most backward area. During the periodic visits to schools, new entrants are examined, double antigen injections is given along with prophylactic Vit 'A' and iron supplements. Doctor and public health nurse attached to this section participate in parent's meeting to discuss matters related to the health of the school children. Referred cases are examined by Eye, ENT and Dental clinics.

The activities of the Health Education Section are integrated with other clinics of the Centre. It arranges film shows, exhibitions, group talks and community meetings to educate the community on health. Good use is made of special occasions like Family Planning Fortnight, World Health Day, etc.

The T.B.Clinic provides out patient domiciliary treatment to patients. The services rendered by this clinic include detection of positive cases, treatment health education, contact tracing and follow up of closed and inactive cases. Rehabilitation of the treated cases and cases under treatment are arranged by this section.

The Public Health Laboratory carries out various bacteriological examinations on the samples of blood, urine, sputum, stool etc., received from patients referred by different clinics of the health centre and local private medical practitioners.

The Social Welfare Section plugs the loopholes left by a purely clinical system in discharging comprehensive health services to a community. To the T.B., S.T.D. and mentally sick patients, medicare is not all that is needed. At times the community needs are to be moulded to accommodate the patient. At times they or their dependents require to be employed so that the family may have some income so long as the patient is being treated. All this is done by the Social Welfare Section through its battery of social workers. In collaboration with Khadi and Village Industries Board, a rehabilitation workshop has been set up to provide employment to the relatives of poor patients. A nursery school is also run by this section.

The X-ray clinic operates only twice every week. it has two sections:

i. Mass Miniature X-rays and

ii. Standard Size X-rays.

Mainly chest X-rays are done. Cases referred by various clinics of the Centre and by local doctors are looked into.

The health centre has a group of nurses who mainly render domiciliary services in implementation of various health schemes. They are organised under what is called, nursing division. They render useful services also in compiling and maintaining various health records.

The centre also has Eye, ENT, Dental and Mental clinics all of which are run only for part of the week. The main objective is to detect at an early stage and rectify the complaints chiefly among infants, toddlers and school children.

Health statistics provides a yard stick to the health administrators to measure the progress. The main job of the statistics section of the Centre is to maintain important figures of as recent a date as possible. A monthly and annual report are prepared by this section which presents, in numerical terms, the account of work done by every section of the Urban Health Centre, Chetla in the month and year under consideration.

IV. Impact of Services Vis-a-Vis Achievement of Health Status

The statistics do indicate that over the years, services rendered through Urban Health Centre, Chetla supported by relevant research activities have made over the years a momentous improvement on health status of the community. (vide table 8). In most of the health parameters, Chetla stands significantly better than National averages. Thus, its birth rate, infant mortality rate, crude death rate, maternal mortality rate, differed favourably from national averages (table 12). On utilization side, immunization coverage rate and practice of family planing is much better than other parts of the country (table 8, 9 and 10). In fact, in most health measurements, Chetla has already achieved the HFA targets as recommended by Government of India to be achieved by the year 2000 A.D. (Table 12).

Further more, on observing the pattern of deaths through some leading causes over the years (table No.11), it is to be noted that the change has been marked in relation to shift of deaths from communicable to non-communicable. Thus proportion of deaths from respiratory and diarrhoeal diseases have been significantly lowered during the period from 1957-85 while proportion of deaths from non-communicable diseases like heart disease, malignanacy etc. have increased significantly over the same period. This perhaps reflects the significance of meaningful preventive and promotive services together with other health related services that are delivered through Urban Health Centre, Chetla in prevention and control of communicable diseases thereby restoring and preserving the health of the community. From all these deductions, it may be concluded that for appropriate health care vis-a-vis Health for All, intersectoral co-ordination at the community level is a must and UHC Chetla's example can be taken as a vivid illustration to justify the above statement. It demands a meaningful planning in which inputs from health promoting sectors are co-ordinated and organized in such a way at the community level, that each and every member of the community gets the services of these sectors on equal footing.

Table -1

Proportion of Households in Bustees (Slum) and Non Bustees

Type of Locality	Percentage of Households
Slum	43.8
Non-Slum	56.2
Total	100.0

Table - 2

Proportion of Households According to Type of Family and Type of Locality

Type of family/locality	Slum	Non-Slum
Nuclear	82.5	75.1
Joint	17.5	24.9

Table - 3

Percentage Distribution of Households According to the Family Size in Relation to the Type of Locality

Family size	Locality		Combined
	Slum	*Non-Slum*	
1	7.1	7.6	7.4
2	9.9	6.7	8.2
3	13.3	14.3	13.8
4	16.6	18.0	17.4
5	17.3	14.5	15.7
6	12.7	12.7	12.7
7	9.6	8.4	8.9
8	5.0	6.3	5.7
9	3.3	3.3	3.3
10+	5.2	8.2	6.9

Table - 4

Age Distribution (in percent) in Relation of Type of Locality

Age group *(years)*	Locality		Combined
	Slum	*Non-Slum*	
<5	10.6	7.3	8.7
5-14	25.9	15.1	21.5
14-49	52.6	59.0	56.2
50+	10.9	15.6	13.6

Table - 5

Percentage Distribution of Households According to Per Capita Monthly Income of Slum and Non-slum Localities

Per Capita Monthly Income(Rs.)	Locality		Combined
	Slum	*Non-Slum*	
40	12.4	3.0	7.3
40-49	8.3	1.7	4.7
50-74	27.5	9.5	17.6
75-99	13.6	9.3	11.2
100-194	14.5	12.2	13.2
195+	23.7	64.3	46.0

Table - 6

Literacy Status in the Population Covered

Literacy Status	Slum		Non-Slum		Total		C
	Male	Female	Male	Female	Male	Female	
Illiterate	24.8	43.6	13.9	23.7	19.7	34.3	26.5
Primary	29.2	27.8	16.6	20.7	23.2	24.5	23.8
Secondary & Higher Sec.	42.1	27.5	51.8	45.5	46.7	35.9	4.7
University	3.9	1.1	17.7	10.1	10.4	5.3	8.0

Table - 7

Population in Service Area and Users of UHC Service

Total Population under UHC services	Slum Popn.	Non-Slum Popn.	Total No.of users of UHC services	No.of Users	
				Slum	*Non-slum*
80000	35000	45000	56000	35000	21000
Percentage	43.8%	56.2%	70%	100%	46%

Table - 8

mportant Demographic Indicators in Selected Years in the Service Area of the Urban Health Centre (Rates expressed per thousand)

Years	Crude Birth rate	Crude Death rate	Infant Mortality rate
1957	40.7	11.9	77.9
1961	55.6	9.0	73.7
1966	25.7	7.9	73.0
1971	24.1	8.8	75.1
1976	22.7	9.6	88.2
1981	20.0	7.0	48.9
1986	18.0	6.8	42.8

Table - 9

Prevalence of Family Planning Practice among eligible couples (Rates expressed as percentage)

	1968	1972	1979	1983	1986
All methods taken together	34.2	40.4	45.4	55.0	62.0
Permanent methods	8.1	10.6	16.4	18.7	22.2

Table - 10

Immunization Coverage
(Rates Expressed as percentage)

	1981	1987	1988
B.C.G.	35.0	70.00	78.3
Polio	54.8	72.00	81.6
D.P.T.	59.0	68.00	82.5
T.T. (antenatal mothers)	58.3	61.00	86.2

Table 11
Seven Leading Causes of Death in the Area
(as proportion of total deaths)

Causes of death	1957	1968	1979	1983	1985
Heart diseases including hypertension	3.7	7.5	12.9	14.6	19.3
Pneumonia, bronchitis & bronchopneumonia	16.7	14.1	11.5	13.9	9.4
Cerebral haemorrhage & thrombosis	0.7	2.7	4.0	8.2	7.7
Malignant Neoplasm	1.9	4.8	4.9	6.1	6.0
Dysentry, diarrhoea gastroenteritis & colitis	14.9	12.7	7.5	4.8	6.7
Tuberculosis (all forms)	4.9	5.8	7.5	4.6	5.6
Prematurity	4.7	12.2	4.8	3.7	2.9

Table - 12

Health Indices and Utilization Pattern of Preventive and Promotive Services (National figures, UHC, Chetla figures, and targets of Health For All by 2000 A. D.) (Rates expressed per 1000 unless otherwise mentioned)

Index	National Level 1987	UHC, Chetla 1987	Target 2000 A.D.
Crude birth rate	32.5	17.4	21
Crude death rate	11.5	6.6	9
Infant mortality rate	95.0	48.3	60
Maternal mortality rate	3.04	0.0 (84,85,86)	below 2
Life expectancy	56.02	62.0	64
Family size	3.08	2.25	2.03
Immunization coverage			
Tetanus toxoid	47.00	61.00	85.00
DPT (under 1 year)	58.00	68.00	100.00
Polio (under 1 year)	50.00	72.00	100.0
BCG	46.00	70.00	100.00
Contraceptive Prevelance in percntage	34.00	56.5	60.00

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11. Reaching the Unreached - A Health Information System for Delivery of Comprehensive Health Care to the Community

*Shavinder Singh**

I. Introduction

In future the major advances in health will come, not from technological breakthroughs but from improvements in two other spheres; the planning and management of the use of existing technology and changes in life style.

Good planning and management depends upon the availability of reliable, accurate and timely information about the health situation of the population. Evaluation of the effect of interventions related to the life-style also requires valid information. Such information required must be representative of the community and should be community-based.

II. An Information System for Delivery of Comprehensive Health Care

The proposed system comprises three components:

1. Family Folder
2. Master Register
3. Workers' Diary

Used properly, they provide an accurate profile of health of every community and make it possible to give care to all and the greatest amount of care to those in greatest need.

1. Family Folder

The format is shown in Annexure-1. The family folder belonging to each village are kept in serial order separately.

Instructions on filling in family forlders

Each family in the community has a family folder. Various points in the family folder need to be carefully filled. The family folder number is written as K.K-1, depending upon the name of the village as Katani Kalan or Jamalpur, for easily identification. The house number is same as malaria surveillance number.

Under 'immunization' simply tick DPT, Tetanus Toxoid and Polio but only IF THE IMMUNIZATION SCHEDULE IS COMPLETE.

Remarks:

Mention relevant facts such as malnutrition in under five children, tuberculosis, in case of death, the data, age and cause of death.

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1.1. Instructions for use of White, Yellow and Pink Cards

1.1.1. White Card

i. For all sick persons above the age of 5 years.

ii. For all area married women 15 years to menopause, who since they are eligible for family planning will have a Target Couple Stamp on the card. If there has been vasectomy or tubectomy enter in eligible section but score through Target Couple Stamp. Always note dates of Tubectomy, Vasectomy, insertion of intrauterine device or removal of device, stoppage or start of use of conventional contraceptive or hormones etc.

Only when the wife reaches the menopause is this couple scored off the eligible couple list in the Master Register.

Each eligible couple will have an E/C number (Sr. No. omC/C list or the year of entry), this should be noted on the WHITE CARD. The E/C list if used properly is a very effective service tool. In case of couples who are sterile, near menopause, couples with no child under five years, it is written "inappropriate advice" with the result that worker will not waste time on these Eligible Couples. If `urgent sterlization' or `urgent spacing' is written in pencil opposite the name of couple the most urgent family planning work can be identified.

1.1.2. Yellow Card

i. For all pregnant mothers (belonging to the area and incoming) if incoming write I/C.

ii. When an outgoing mother delivers (where you have not seen the mother or baby) enter whatever details you have in the labour and puerperium section (enter the same details in Maternal Services section of the Master Register, the birth in changes section and the details of the child in the Children's Services section. Make a Pink Card for the Child.)

iii. Out-going Mothers: Mothers who belong to the area, but go to their maternal home for delivery.

iv. Area Mothers: Mothers who belong to the area and continue staying in the area for delivery.

v. Incoming mothers: Daughters who come into the maternal homes in the area for delivery.

vi. Assessment of Grade of Activity: Few village women take adequate rest in pregnancy and many are unable to do so but workers must attempt to assess their activity and find out where reduction might be possible. Grade of activity is classified from grade I-V depending upon the severity of exertion, ranging from routine household activity to working as a daily labourer.

Having assessed the grade, the worker should advise accordingly. There is no point in blindly ticking grade IV and advising Grade III without confirming that this is possible.

1.1.3. Pink Card

i. For all the area children under five years.

ii. When a new birth takes place, the Pink Card is made only for area children. This also includes births which have taken place outside the area, i.e. to out-going mothers.

iii. Whenever a Pink Card is made, make sure the column for age is filled up on the Road to Health Chart as shown in Annexure.

Card number is given according to the serial number in the Children's Service Register, e.g. a child with serial number 1 will have a card number 1/79 (79 years of entry). Even if a child born in 1976, comes to live in the area in 1979 and his serial number is 20 his card number will be 20/79 (not 20/76).

During the baseline survey every child upto three years of age is weighed and weight is plotted against age. If the age beyond is three years the biceps strip is used and child with measurement in yellow and red region should be weighed. All children will be weighed when they attend the health centre.

1.1.4. Index Card

Any member of the family coming to the health centre should bring it with him.

2. Master Register

This is simply a method of obtaining an accurate knowledge of a community. Without this knowledge it is difficult to provide the care to the needy. One master register is maintained for every village. The format is given in Annexure - II.

Purpose of Master Register

i. To help plan comprehensive services to community.

ii. To indicate total population and composition of the population.

iii. To help determine easily, important rates of birth, death, IMR and also family planning practices.

iv. To monitor changes, achievements, failure, course and use on a training, teaching and research tool.

The items indicated in the Master Register are by no means inflexible but in Punjab they serve the purpose.

It has six sections. The number of pages required in the register for each section to cover a population of 5000 is as follows:

i. Baseline survey - 35 double pages (each 30 lines)
ii. Monthly or quarterly reports - 15 double pages
iii. Changes - 75 double pages.
iv. Maternal Services - using one double page per month,
allow 50 double pages (i.e. 4 years pregnancies).
v. Children's services - 50 double pages.
vi Eligible Couples - 50 double pages.

2.1 Baseline Data (Section)

This is recorded ONLY ONCE when an initial survey is made of every area. Each family is entered in its totality under appropriate headings. At the end of each page, add up the columns. At the end of the survey a summary is to be made as illustrated below.

	Total	Scheduled Caste	Non Scheduled Caste
Population	5212	1212(24.15%)	4000(75.85%)
Families	1033	208	825
Children 0-5 yrs.	736(12.4%)	183(15%)	553(11.78%)
Eligible for FP	931(15.7%)	194(16%)	737(15.6%)
Tubectomy	88	21	67
Vasectomy	59	15	44
I.U.C.D.	29	2	27
C.C.	123	6	117
Effective coverage	236(23.34%)	40.9(21.08%)	195.15(25.5%)
Births in 1978	150	37	113
Birth rate in 1978	28.7	30.5	24
Births in 1979 by end of survey	43	9	34

All folders are supervised by the medical officer or supervisor for accuracy. Field worker notes down the families of those who need special care. For example:

Pregnancies i.e. folder number 30, 31 and so on...
Infants folder number 36, 49 and so on...
Children: 1-5 years with malnutrition
1st degree malnutrition - Family Folder No 26, 31
2nd degree malnutrition - Family Folder No. 26, 37
3rd degree malnutrition none

In this way the hard core problem of the community can be learnt. Doctor can make the baseline nutrition profile of underfives so that it is possible to know where extra health education needs to be given. The profile will reveal the most needy and hence appropriate action can be planned.

2.2. Changes Section

These are entered after each home visiting session and totalled at the end of the month for report, including percentages to deduct errors and observe the progress.

Remarks

Enter in remarks column, 'new family in', family gone, but particularly in case of death, the name and cause of death should be entered. This column can provide a lot of information.

2.3 Maternal Services Section

This section is used at the rate of one double page each month. The new pregnancies detected are entered according to the due date for delivery and a yellow card is prepared for each new pregnant mother.

Note on using this section

a. All married women from age 15 to menopause are asked during routine home visit by female health worker, the date of L.M.P. so that pregnancy can be detected as early as possible.

b. Write I/C for Incoming in RED ink, this will bring to your notice at once. Some area mothers will go out, they are still the area population, but when they go write "Gone out" in remarks and nothing is done until they come back with the baby. Incoming are NOT area mothers but services are given to them. By entering according to due date and month one can see at a glance who is due to deliver in the next one, two or three months, who needs tetanus toxoid, who needs to be visited urgently regarding arrangements for delivery. At the end of each antenatal clinic all area and incoming mothers are also entered into this section.

c. When a pregnant woman goes out of the village to her maternal home without the workers having ascertained the date of the last menstrual period, or expected date of delivery she cannot be entered in the maternal services section of the master register. However, yellow card is made with as many details as possible. Following delivery, entry is made in the register about the month of delivery and a note is made in the remarks column 'found after delivery'.

d. When a woman conceives in the period of lactational amnorrhoea, fundal height is utilized to enter the date of delivery.

e. Monthly check for **Quality of Maternal Services.**

An illustration is given below:

New mothers contacted during the month	..	10		
Trimester contacted	..	1st	2nd	3rd
		1	6	3
Tetanus Toxoid status of mothers due in next three months				
Number protected by 2 or 3 doses or booster	..	26		
Number unprotected	..	4		

2.4 Monthly Summary

An illustration is given below.

Balance Pregnant at end of Previous Month	..	A
New area mothers contacted during the month	..	B
New incoming mothers contacted during the month	..	C
Delivery during the month	..	D
*Outgoing during the month	..	E
Left Area, Abortion	..	F

Balance Pregnant at the end of the month : (A+B+C) - (D+E+F)

*Do not count deliveries of outgoing mothers in "D" as they have been previously counted in "E".

2.5 Children's Services Section

As each live birth is discovered, enter immediately in this section as per columns shown. At the same time a pink card is made and placed in the family folder. When the child is given a serial number in the Register this Number is written clearly on pink card so that the child can be identified quickly, i.e. the 6th in 1979 will be recorded on pink card as 6/79.

When a child becomes over five or has left the area or dies, score through whole line and write reason for scoring. In remarks also write date of death, age, cause and anything special about the child, especially malnutrition and degree of

prematurity, age and cause of death etc.

After each home visit fill up all relevant details, in the Master Register. At each clinic the supervisor will give the health worker the cards of the area children who are under five so that their details can be filled into the Children's Services Section of the master register.

2.6 Eligible Couple Section

All the eligible people for family planning, married women 15-menopause including sterility cases, are entered in this section/register. This section has to be updated

1. Whenever a new birth takes place
2. Somebody starts using a contraceptive
3. Changes the contraceptive
4. Reached menopause
5. Becomes a widow or divorcee

In the last two circumstances, their names are taken off from the register.

The E/C list, if properly used is a very effective service tool. In remarks column, opposite the sterility, near menopause couples with the 'no child under five years' it is written 'inappropriate to advise'. Thus workers will not waste time on these couples. However if urgent sterlization or urgent spacing is written in pencil opposite the name of the couple, the most urgent family planning work required to be done will be easily identified. Information gathered at home visiting may be added with effect, for example, urgent sterlization may be deferred since the husband has gone abroad for a year.

3. Worker's Diary

The diary, while probably the least 'spectacular' of the three tools, is extremely important since, used correctly, it ensures that nobody's need at THAT TIME is missed.

Following home visiting, after noting from each folder, changes and events in the Master Register, the worker makes an entry in her diary. For example, in folder number 6, the lady has agreed to have an IUCD, she is due to have her menstrual periods on the 10th December. This is entered in the diary so that the HW will visit her and make sure the IUCD is inserted. A PLAN IS MADE FOR EVERYBODY WHO HAS A NEED and the diary is an effective way of ensuring that no need is overlooked. It is also a useful tool for a supervisor to look back on activities due two months previously, and check back from the folders, the care given to someone whose name was written in the diary. If no action has been taken then the entry on the diary was an exercise in futility and calls for action by supervisor.

III. Experiences With the System

The comparative data of Sahnewal block of Ludhiana District is shown in Table I. This methodology was started in 1978 in few subsidiary health centres and later on was expanded to cover almost whole of Sahnewal block under ROME scheme in 1981. This data has been obtained from annual reports of the Department. Some selected indicators of MCH and Family Planning are shown.

1. The immunization coverage has increased gradually from 1981 onwards. Notable among these are coverage of BCG which has increased from 30.3% in 1981 at 89% in 1989. Almost similar success has been achieved in case of other immunizations. The coverage of T.T. of pregnant women has reached nearly 90%.

2. The family planning coverage has increased from 22.6% to 51.2% in 1988, However the birth rate during the same interval has changed very little from 25.24 in 1982 to 24.2 in 1988.

3. The death rate has almost remained same. However the infant mortality rate has decreased from 68 in 1982 to 46.5 in 1988. Maternal deaths have become nil.

Until now the emphasis has remained primarily on MCH and Family Planning. Other components have received little attention primarily because the priority area of the government infrastructure has been family planning and immunization only. Recently the interms posted in department of SPM are being involved in detection of hidden morbidity in the community.

IV. Conclusions

This information system provides indicators to assess performance, achievements and failures. This helps us to plan future actions accordingly.

Table - I

Consolidated Data of Sahnewal Block from 1981-88

Consolidated Data	1981	1982	1983	1984	1985	1986	1987	1988
Population	84646	85810	100608	89049	91483	88582	80726	89794
No. of families	13640	13815	15904	14215	14334	12687	12189	13527
Elig. for family plg.	12482	12742	14746	13466	13787	13381	12560	14009
Effective Coverage	22.6%	34.0%	38.0%	42.0%	46.53%	49.28%	50.09%	51.2%
Children 0-5	9553 (11.20%)	10336 (12.05%)	12091 (12.02%)	10914 (12.26%)	10804 (11.8%)	9458 (10.68%)	9099 (11.27%)	9668 (10.77%)
Immu. D.P.T complete	39.2%	63%	64%	65.7%	76.8%	76.8%	79.2%	80.6%
OPV (Complete)	36%	62.6%	63.7%	65.67%	74.5%	76.8%	79.2%	80.61%
B.C.G.	30.3%	64%	70.1%	72.2%	76%	66.9%	83.86%	89.0%
Measles	-	-	-	-	-	12.24% (0-1yr)	24.8% (0-5yr)	30.5% (0-5yr)
% age protection of antenatal mothers with T.T.	-	84.1%	86.8%	87%	91.5%	86.15%	95.7%	97.5%
Birth rate	-	25.24	25.30	18.9	22.9	23.08	24.27	24.2
I.M.R.	-	68	71.9	82.7	69.0	57.25	49.48	46.5
Maternal Deaths	-	2	6	2	2	2	2	-

References:

1. *World Health Statistics Quarterly - Vol. 41* No.1 1989.
2. Shah. X. et al 1989 *Epidemiology in Primary Health Care* 1st Edition.
3. *Annual Reports* of Department of SPM and C.H., CMC Ludhiana
4. *Methodology for Delivery of Comprehensive Health Care,* Department of SPM, C.H., CMC Ludhiana.

LIST OF FAMILY MEMBERS					Relationship	Maternal			Education Status	FAMILY PLANNING					IMMUNIZATION					REMARKS
No.	Date of entry on list	NAME	Relation to head of Family	Age at entry on list or date of birth		P	M	S SS		Eligible For F. P.	IUCD	Vas	Tub	Conv	Small-pox PR	B.C.G	DPT	TT	Polio	Date of death if known cause of death health status etc.

P—Pregnancy M—Menopause S—Sterile SS—Secondary Sterility PR—Primary

Date	Height of uterus	Foetal Heart	Position Presentation	Foetal Head	Urine Albumen	Urine Sugar	Blood B.P.	Blood Hb.	Weight	Remarks	Treatment	Signature

MATERNITY CARD

Date Card made.....

Name.....Address..... Folder No.....

Husband's Name..... Card No.....

Age.....S.C/Non-S.C/B.C. Worker's Name.....

Known history of Diabetes.....Tuberculosis .....

Hypertension.....Heart Disease.....Abdominal Surgery.....

Physical Disability.....Blood Transfusion.....

Other history.....

PREVIOUS OBSTETRICAL HISTORY

Pregnancy Order Number	Date of delivery	Weeks of gestation	Delivery	Sex	Still birth/ living/dead
1					
2					
3					
4					
5					
6					
7					
8					
9					

L. M. P.....

E. D. D.....

Tetanus Toxoid.....

(Dates)

1st.....

2nd.....

3rd.....

Booster.....

Pregnancy

Planned—Yes/no

If unplanned-
Wanted—Yes/no

DIET (quantities per day)

	No. of Chappaties	Veg.	Milk	Curd	Egg	Meat	Dal	Green Veg.	Salad	Fruit	Other
At 1st contact Trim											
In 3rd Trim.											

ACTIVITY

	grade				
At 1st contact	1	2	3	4	5
In 3rd Trim.	1	2	3	4	5

EXAMINATION

Height..... Heart..... Weeks of gestation at 1st

Weight..... Lungs..... Contact.....

Skin..... Breast & Nipples.....

Signature of worker or-
doctor.....

Arrangements for delivery..... Arrangements for family planning.....

LABOUR

Date and time of onset..... Conducted by..... Sex.....

Date and time of delivery..... Type of delivery.....

Congenital abnormality..... Condition of baby..... Birth weight.....

PUERPERIUM visit in 1st 7 days..... Complications of Puerperium.....

40th day approx. Baby alive/dead..... Family Planning method accepted.....

Lactation established.....

Signature of worker.....

Annexure - II

BASELINE DATA

Date	Ser. No.	House	F.F.	Name of Head of Family	S.C. N.S.C	Total Family	Elig. for F. Plan. Marr.Women 15-m	Sterile	Family Planning Status					Preg-nant	0 - 5 ch	
									Tub	Vas.	IUCD	CC	Other		No.	

CHANGES

Date	Ser. No.	House	F.F.	Head of Family	SC. NSC BC	IN	OUT	Elig. for F.P.	Family Planning Status					0-5 Child	New Birth & Date		
									Tub	Vas	IUCD	CC	Other			Inf. 0-5	To 1-

MATERNAL SERVICES

Date	Ser. No.	House No.	FF	Mother's Name	Husband's Name	SC NSC BC	Para	Age	EDD	Ar/lc	Trimester Contacted			Date of ANC attendance			Tetanus Toxoid			Delivery				Sex	S
											1	2	3	Tr.1	Tr.2	Tr.3	1	2	3	Date	Type	Place	By Whom		

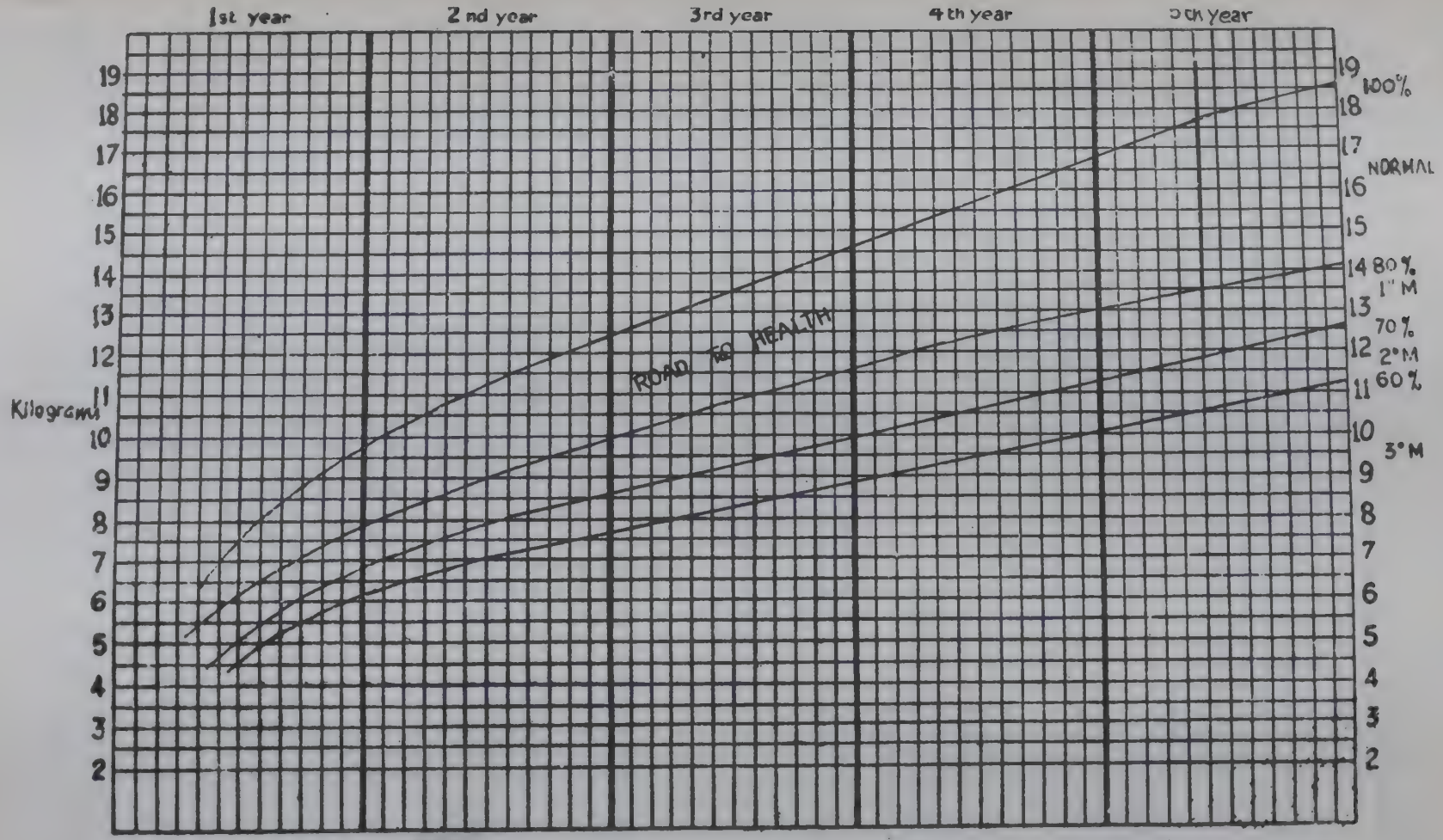
CHILDREN'S SERVICES

Date	Ser No.	House No.	F.F. No.	Name	Father's Name	Sex	S.C. B.C. -	Date of Birth	Immunisation									
									BCG	Measles	D.P.T.				POLIO			
											1	2	3	B	1	2	3	B

ELIGIBLE COUPLES

Date	Ser. No.	House No.	Folder No.	S.C. B.C.	Wife's Name	Age of Wife	Husband's Name	Sterility/ Parity	No. of living Children		Sex & Date of Birth Youngest	Family Planning Method				
									M	F		Tub.	Vas.	IUD	CC	Others

S.C. = Scheduled Caste; N.S.C. = Non Scheduled Caste; B.C. = Backward Class


1st year
2 nd year
3rd year
4 th year
5 th year
Kilograms
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
ROAD TO HEALTH
100%
NORMAL
80 %
1° M
70 %
2° M
60 %
3° M

CHART

INDIVIDUAL CARD

Name ..... Age ..... Folder No. .....

Address ..... E.C. No. .....

Part Illness

Date	Remarks & Treatment

INDIVIDUAL CARD

Name ..... Age ..... Folder No. .....

Address ..... E.C. No. .....

Part Illness

Wife of :-

Target Couple

Date	Remarks & Treatment

CONTINUATION SHEET

Name ..... Folder No. .....

Card No. .....

Date	C.H. or C.C.	Age	Weight	Progress, Advice, etc.

Name of Head of Family:

Family Folder No:

House No:

Address:

NAME ..... VILLAGE .....
BLOCK ..... DISTRICT .....
HOUSE NO ..... FOLDER NO. .....

Occupation of Head of Family .....
CASTE-S.C., Non S.C., B.C. .....
Worker's Name .....

SOCIO-ECONOMIC STATUS OF FAMILY

HOUSING

Construction

Walls	All brick/mixed/all mud
Floor	Paved/dung/other
Roof	Brick/thatch/other
House	Owned/rented

Number of Rooms

Electricity

ANIMALS

Oxen	Cows
Buffaloes	Goats
Camels	Hens

Other

Animals Kept:

In House in living room

Separate room

Separate cattle shed

Shed away from home

SANITATION

Water Supply	Drinking	Other Uses	Private	Joint
Open well				
Hand pump				
Tube well				
Tap				

Distance of Drinking water from animal

from latrine

Disposal of Wastes

Drainage	None	Latrine	Field or Street
	Into Street		Open pit
	Soakage		Water seal
			Septic tank

MECHANICAL POSSESSIONS

.....

.....

.....

SOURCE OF INCOME

i.e. land, occupation, trade, etc.

.....

.....

Rich
Moderate Rich
Poor
Very Poor

12. Centre for Health, Education and Welfare Lessons from K. V. Kuppam.

Thomas P. Benjamin, Solomon Victor* and Abel Rajaratnam**

I. Introduction

Rural health programmes are seldom tackled effectively due to the social and economic conditions of the rural areas in India. With paucity of medical personnel, equipment, drugs and related infrastructure, the problems of delivering health care to the rural communities become more acute.

Alternative models that are practical and realistic considering the patient motivation, social, economic and political conditions in rural areas are needed. The Voluntary and Government sectors are constantly in search of effective models for delivery of health care to achieve social justice. The Mini Health Centre, Tamil Nadu, Integrated Nutrition Project and Integrated Child Development Services are examples of such models.

RUHSA, a Department of the CMC and H, Vellore has undertaken to improve the welfare of the community in K.V.Kuppam block in North Arcot District.

II. Infrastructure of the Centres for Health, Education and Welfare

1. **Reach of the Centres**: Eighteen service areas were delineated in the block of which two had the Government Primary Health Centre and RUHSA's base hospital respectively. The remaining sixteen service areas with one thousand families or five thousand population approximately, have full fledged centres working. The two service areas with health facilities have approximately ten thousand population each.

2. **Building**: The buildings for the Centres for Health Education and Welfare (CHEW) are rented or owned sometimes with land donated by the community. In sixteen centres, clinics are conducted. In the other two areas, a clinic is not necessary and then the CHEW serves as a base for health, education and welfare activities.

3. **Accommodation for Staff**: The doctor along with an ANM travels to the health centre by a van for the weekly clinic. The Rural Community Organizer lives in the area. Rented accommodation has not been a difficulty for this person. The other personnel who are volunteers from the community are expected to be residents of the area and thus accommodation is not a concern to the organization.

*RUHSA Department, Christian Medical College, Vellore, Tamil Nadu

III. Staff Pattern and Functions of the Centres

1. Staff Pattern

Part time doctor	-	one
Part time ANM	-	one
Part time technically supporting person	-	one for each area of welfare
Rural Community Organiser	-	one
Health Aid	-	one
Women's Organiser	-	one
Village Agriculture Guide	-	one
Family Care Volunteer (one for 200 families)	-	Five or more
Animator	-	One per centre.

2. The Centres plan and carry out both health and developmental activities, integrated through training, educational, economic, health and agriculture activities. In all these areas, the activities of the staff are of two categories. One is to provide services like health and curative services, training programmes, liaison work etc. directly by the staff of the Centre. The other is to develop the community to take over part or whole of the functions, for example, training the local community based health aids, women's organizer, village agricultural guide, etc.

V. Results

The results are best measured by certain parameters that indicate the utilization of the health centre and impact on health of the community.

. Infant mortality rate has come down from around 116 per 1,000 live births in 978 to about 65 per 1000 live births in 1989.

. Over 80% of the mothers of under two children have fully immunized their hildren with one dose of BCG, two dozes of DPTP and one dose of measles.

. Over 85% of the mothers go for antenatal check up to the clinic or Governent hospitals.

. Birth rate is around 21 per thousand population.

. Incidence of Polio has come down to one case in a population of one lakh in 989.

. Less than 10 cases of measles were reported or identified in 1989 in the Panhayat Union.

. The number of cases attended to in a month per centre in 1982 was 165 while was 257 in 1989.

. Lessons for Managing Health Care Delivery in Rural Areas

RUHSA's approach to health care delivery in Rural areas comes close to the obal strategy for health for all using an intersectoral effort.

The approach to promotion of health and prevention of communicable diseases supported by weekly clinic and a referral centre could be considered close to the necessary steps to be taken through a problem solving approach in the relevant sectors.

2. Simple low cost technique for prevention of deaths in children, improving their growth, water purification, enriching the soil can be disseminated using the volunteers for personal contact and mass media with beneficial effects in the community.

3. The weekly visit of doctors is found adequate. Considering that qualified physicians are hard to get, particularly in rural areas, this is a useful learning. Inspite of the RUHSA campus life and good living conditions provided, the turnover of doctors is high.

4. The patient attendance at the Clinic has improved over the years. The increase has been more for preventive services of immunization. The number of cases for tubectomy in the base hospital have also increased over the years. Many of them are voluntary decisions after the second or third child.

5. The multi disciplinary approach provides greater scope for contact in the community. The concern of the organization beyond medical intervention is explicit. This provides greater avenues for community participation and health education in its attempt to improve community health.

6. Segmenting the population to reach higher risk groups with the appropriate package of health services utilises limited resources effectively. In an area with high infant mortality, incidence of communicable diseases, high birth rate, etc. indicating poverty and high population density, the emphasis was on antenatal care and child health care. Health education was on antenatal care and child health care. Health education, preventive services and follow up for FP motivation were concentrated on this segment of the population. For instance, sanitation was not emphasized in the first ten years as an input.

7. The approach proved that the targets fixed for 2000 A.D. are realistic as shown by achievements in the project area.

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13. Naujhil Integrated Rural Project for health and Development (NIRPHAD) Linking Health with Inter-sectoral Development

(Abstract)

*E. B. Sundaram**

NIRPHAD is a health programme which is attempting to link socio-economic development in 80 villages in the district of Mathura, Uttar Pradesh, located 240 kms. south of Delhi. It has loose links with Agra Regional Conference of the Methodist Church in India.

After 87 years of a purely curative service through two hospitals in the district of Mathura, U.P., NIRPHAD has developed a concept that unless health becomes an integral part of the socio-economic development programmes, it will not contribute to the essential ingredients necessary to improve the overall quality of life. In this presentation, the strategy developed to provide overall health and developmental services and various links established between health and development were highlighted.

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*Director, NIRPHAD, New Delhi

14. Mother and Child Care - A New Approach (Abstract)

*M. Soosai Marian**

Mother and Child Care has been fast gaining importance currently in national and international circles as the key component of community health. Massive inputs are being made in developing countries to implement mother and child care programme. Inspite of massive investments, deaths of mothers and children continue to occur in alarming proportions. This warrants deeper analysis as to whether the Mother and Child Care Programmes are adequate or not.

An example of the possible inadequacies in the system is shown by the prevailing situation in three regions of Kanyakumari district where MCH measures are being implemented successfully by various service organizations. In the coastal villages, alcoholism, wife-beating and child abuse continue to flourish side by side with MCH programmes. Thus mere nutrition, immunization or maternal services cannot by themselves promote maternal and child health which requires intervention in these social problem areas also.

Similarly among the tribals of Kanyakumari district, the MCH programmes are being implemented in isolation, without taking cognisance of rampant leprosy among the people with a prevalence of about 30%.

In the inland areas of Kanyakumari district, incidence of filaria is assuming alarming proportions and the MCH programme does not provide for its prevention and treatment in the target population.

Hence there is need to re-evaluate the concept of Mother and Child Care and redefine its scope.

*Secretary and Executive Director, Programme for Human and Development, Kangiracode, Tamil Nadu

V. PRIORITIES AND STRATEGIES FOR HEALTH CARE

15. Priorities and Strategies in Health Care In Madras City Urban Slums under IPP - V

*Kodimani Shanmughasundaram**

I. Introduction

Madras City is the capital of Tamilnadu. It is the fourth populous city in the country with a population of 41 lakhs, next to Calcutta (92 lakhs), Bombay (82 lakhs), and Delhi (57 lakhs). The population of Madras City represents one fifth of the urban population of Tamil Nadu. There are 1,700 slums in Madras City and about 14 lakhs of people are living in these slums. The slum population is increasing at a rate much faster than in other parts of the city. This rapid population growth has led to deterioration in the quality of life and is causing tremendous pressures on the civic amenities and health services in the city.

II. Health Priorities and Needs of Madras City

The ICMR recently carried out a study in the urban slums of Madras, to find out the priorities. The following were some of the findings.

Perinatal Mortality rate	..	65.3
Neonatal Mortality rate	..	57.7
I.M.R.	..	94.5
Still births in Madras City Slums		25.9%

and also

Mean age of marriage	..	14.7
Fertility rate	..	144/1000 (15 - 49 yrs.)
Birth rate	..	21/1000
Maternal Mortality rate	..	3/1000
Maternal Morbidity rate	..	19.3%

The study also revealed that 77% of the urban slum mothers did not receive a single visit by the health workers.

These findings justify a total programme for mothers and child welfare, including spacing and sterilization, backed by educational and economic support for women.

III. Objectives of the IPP-V

The present project is confined to the improvement of health services in the area of maternal and child health care with special emphasis on improving the acceptance and use of contraceptive methods, to achieve the national targets of HFA laid down in the National Health Policy.

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*Dy. Project Co-ordinator, IPP-V, Corporation of Madras

The broad objectives are to:

a) Expand Family Welfare and MCH services in Madras and suburbs;

b) Improve the quality of Family Welfare and MCH services in Madras and suburbs;

c) Strengthen the capacity of the State and Madras City to plan, manage and implement Family Welfare Programme in urban areas;

d) Increase the participation of private voluntary organisations and private practitioners in Family Welfare Programme in Madras city.

IV. Strategies

The Project is using the following strategies to achieve the above stated goals/priorities:-

a) Provision of a comprehensive health care centre for 30,000 to 50,000 population by strengthening the existing centres and opening need-based new centres.

b) Improving the antenatal services by appointing one MPHW/5000 population.

c) Streamlining the management information system.

d) Strengthening the IEC component.

e) Strengthening the training and re-training facilities.

f) Involving private voluntary organisations and private medical practitioners.

g) Monitoring, Evaluation and Operational Research.

The proposed project will strengthen the health man-power and infrastructure requirements. The Governmental agencies will work closely with the corporations and municipalities and private and voluntary agencies in achieving the goals and objectives of the project. The man-power, physical facilities and other infrastructure of the voluntary and private institutions will be strengthened. Innovative programmes leading to education and awareness of women, technical skills and employment potential capacities of women will be initiated.

To achieve the above goals, the proposed project aims at establishing 152 health posts and strengthening of other Governmental and NGO infrastructure and training and development of health personnel.

V. Innovative Programmes

In addition to running about one third of the total number of health posts, private, voluntary organisations would participate in innovative programmes for women as detailed below:-

i) They would involve community workers from slums as link workers for health and family welfare.

ii) They would simultaneously carry out programmes for socio-economic upliftment of women.

iii) They would participate in orientation and training programmes.

iv) In-service training programme would be organised by Health and Family Welfare Training Centre with the support of local experts and voluntary agencies.

VI. Principles to be incorporated

1. Proper health policy
2. Multisectoral coordinated approach
3. Community participation and involvement, and
4. Appropriate technology.

In addition to health education, IEC and service activities in the area of maternal and child care, immunization and family welfare, other strategies include review meetings and proper departmental machinery to monitor the activities.

The role of nurses in the implementation of PHC is now widely recognized as crucial. Thus the activities of the MPW(F) under IPP-V receives maximum attention both in terms of defining her role as well as monitoring her functioning.

The proposed project strategy provides for (a) enabling private voluntary organisations currently involved in FW to expand and diversify their activities, (b) scaling up the activities of smaller PVOs who have proven good performance and have necessary potential, (c) encouraging a variety of PVOs depending upon their capabilities to take up motivational educational activities and (d) promoting the replication of successful innovative projects.

Under this project, the private practitioners would be given training as per their needs and requirements to upgrade their skills, specially those who are practicing in slum areas. Training in laparoscopy, puerperal sterilisation, M.T.P., vasectomy and IUD insertions would be organised in four teaching hospitals. Continuing education, seminars, workshops etc. will be organised with the help of Indian Medical Association, voluntary agencies and F.P.A.I.

In order to improve the quality of life in families and achieve the small family norm, it is necessary to improve the economic conditions. The following schemes are proposed to be implemented with the help of NGOs.

(i) Working Women's Forum
(ii) Women's Voluntary Services
(iii) TN Women Development Corporation
(iv) Guild of Service
(v) Slum Clearance Board
(vi) State Social Welfare Board
(vii) Nationalised Banks, Department of Adult & Non-formal Education, SCARF India Ltd.

The above are the major strategies proposed to be employed in the IPP-V project towards better health and quality of life of the slum dwellers of Madras City.

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16. Development and Childhood Malnutrition - A Paradox

R. K. Sachar, J. Verma*, Ved Prakash* and Sandeep Dhawan**

I. Introduction

No other childhood disease compares in importance with childhood malnutrition. Though it may not be quoted as a cause of death on the death certificate, it is responsible for nearly half the childhood deaths, either directly or indirectly.[1,2] It is generally believed that the nutritional status of the under-five children of any community is a direct reflection of the stage of development of that particular community,[3,4]. We present here evidence to the contrary. Development *per se* will have little impact on the nutritional status of the vulnerables, unless specific measures are taken to solve the nutritional problem[4]. Carl Taylor has clearly documented that even at the height of Indian Green Revolution, when agricultural production in Punjab became a model for this part of the world,the poor nutritional status of the low income people in Punjab did not improve[5]. We also present here similar evidence, in form of nutritional profiles of children aged 7 - 60 months studied a decade apart, which shows that in the absence of specific approaches to prevent childhood malnutrition, development of the community will have very little, if any, effect on the nutritional status of the vulnerables (i.e. the young child) and consequently on the related morbidity and mortality.

II. Materials & Methods

The weight for age of the child was taken as the criteria for determining the nutritional status. The children were classified, agewise, into various grades of malnutrition according to the criteria recommended by Indian Academy of Paediatrics[6] taking the Harvard Median as the standard for comparison. A pre-checked spring balance was used for weighing and the weight was recorded to the nearest hundred grams. The first study was done in 1977 in villages in field practice areas of rural training centres of Christian Medical College, Ludhiana. It included 1199 children aged 7 - 60 months. The weight of the child for the first 6 - 6 months depends on birth weight, and breast feeding practices. Also there is a reluctance on the part of parents to weighing of the new born child. Therefore only children who were in second half of their first year were included in the study.

The second nutritional profile of 1054 children aged 7 - 60 months using the same criteria as above was done in 1987 in a comparable rural population in the Ludhiana district.

The reasons for choosing a different population was (i) that in the area where the first profile was done, an intensive programme to combat childhood malnutrition was being carried out[7] and (ii) we wanted to study the nutritional status of the children in absence of any specific intervention programme to see

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whether the "overall development" had any effect on the nutritional status of the young child.

III. Results & Discussions

Table I shows the nutrition profile of 1199 children aged 7 - 60 months. It will be seen that 30.9% of the female children had severe malnutrition (Grade II and above) as against 16.5% of the males. Whereas 51.9% of male children had a normal weight for age, only 37.5% of female children had a normal weight for age.

Table II shows the nutritional profile of 1054 children done a decade after the first study. Here again it is seen that the situation is no different, with 28.5% of female children suffering from severe malnutrition as against 15.5% of the males. The proportion of children with normal nutrition is also practically unchanged.

Table III shows the statistical comparison of the two studies using a Z test. It is evident that there is no significant difference in the nutritional status of two groups of children. Table IV gives the statistical comparison of the children, sexwise, suffering from severe malnutrition.

Table V gives the data on 'development' that has taken place in Punjab from the year 1977 to 1987. It is obvious from this table that overall development over this period has been tremendous. However, when the nutritional status of the young child is seen in light of this 'development', it is obvious that development alone will not change the nutritional status of the vulnerables, unless it percolates down to the ones in need.

Paradoxically our personal experience of working in the field shows that development can sometimes have negative effect on the status of health of the child. The woman labour force has certainly contributed to the green and white revolutions in Punjab but at the expense of 'Mothering time', putting the young child at a greater disadvantage.

IV. Conclusions & Recommendation

Childhood malnutrition is a problem that defies an easy solution. The prevalence cannot be automatically expected to come down as a by-product of development. Specific approaches interwoven within the fabric of community child care are needed as shown by other studies[7,8]. Since established malnutrition is very refractory to therapeutic measures and at best produces "Malnutrition Survivors", preventing malnutrition using a multi-pronged approach of nutrition health education, promotion of breast feeding, control of infections, use of rehydration solution is the only rational means to ensure a good quality of life for the young child.

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Table I

Nutritional Profile of 1199 Children aged 7 months to 60 months (1977)
Study One

Age in months	Normal Nutrition M	Normal Nutrition F	I Mal.Nut. M	I Mal.Nut. F	II Mal.Nut. M	II Mal.Nut. F	III & IV M	III & IV F	Total
7 - 12	54	37	21	19	7	12	3	10	163
13 - 24	79	57	50	45	24	34	7	16	312
25 - 36	71	49	44	46	14	33	7	15	279
37 - 48	51	33	47	37	19	24	4	9	224
49 - 60	60	45	31	40	7	19	8	11	221
Total	315	221	193	187	71	122	29	61	1199
%	51.9	37.5	31.7	31.6	11.7	20.6	4.8	10.3	

Table II

Nutritional Profile of 1054 Children aged 7 months to 60 months (1987)
Study Two

Age in months	Normal Nutrition M	Normal Nutrition F	I Mal.Nut. M	I Mal.Nut. F	II Mal.Nut. M	II Mal.Nut. F	III & IV M	III & IV F	Total
7-12	19	26	19	12	6	6	2	9	99
13-24	88	56	50	43	20	27	4	18	306
25-36	67	45	41	47	13	29	4	12	258
37-48	46	37	39	35	16	19	4	3	199
49-60	49	41	28	35	5	17	7	10	192
Total	269	205	177	172	60	98	21	52	1054
%	51	38.9	33.5	32.6	11.4	18.6	4.1	9.9	

Table III

Statistical Comparison of Study One and Study Two

	Normal Nut.		I Mal Nut.		II Mal Nut.		III & IV	
	M	F	M	F	M	F	M	F
Study One (Male-608 Female-591)	315 51.9	221 37.5	193 31.7	187 31.6	71 11.7	122 20.6	29 4.8	61 9.3
Study Two (Male 527 Female 527)	269 51.0%	205 38.9%	177 33.5%	172 32.6%	60 11.4%	98 18.6%	21 4.1%	52 9.9%
S.E.(P1-P2)*	1.85	1.99	1.88	1.91	1.3	1.66	0.87	1.25
Z Value	0.49	0.7	0.96	0.52	0.23	1.2	0.8	0.32
Significance**	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.

**S.E.(P1 - P2) = Standard error of difference of proportion*

***N.S. = Not significant at 95% level.*

Table IV

Sexwise Statistical Comparison of Children Suffering from Severe Malnutrition

Sex	N (%)	F(%)
Study One (N=1199)	16.5 (N=100)	30.9 (N=183)
Study Two (N=1054)	15.5 (N=81)	28.5 (N=150)
S.E.F.	1.5	1.9
Z Value	0.7	1.3
Significance*	N.S	N.S.

**N.S. : Not significant at 95% level.*

Table V
Indicators of Development in Punjab
(Yearwise)

Indicators	1977	1979	1981	1983	1985	1987
Agri.Prod.Index (*'61-62=100) (+'69-70=100)	272.3*	336.9*	171.52+	197.46+	219.33+	242.79+
Per Capita Net Domestic Prod. (At Constant 1970-71 prices)	1166	1300	1354	1493	1586	1652
Net Irrigatated Area (000' Ha)	3194	3374	3382	3550	3621	3717
Use of Chemical Fertilizer (000' Metric Tonnes)	373	603	762	892	1048	1116
Area under High Yeilding varieties (000' Ha)	3137	3734	4013	4453	4860	5032
Area under Fruits & Veg. (Ha)	46109	52819	51765	94819	108770	107043
Milk Prod. (000' Tonnes)	2695	2926	3221	3599	3817	4302
Annual per capita consuption of elec. (KWH)	239.97	302.14	302.51	333.34	351.71	-
Wages of labor (Agr,Skilled)	11.15	13.17	14.95	17.56	23.75	28.20
Road length (kilometers)	26872	30836	32446	32789	33797	35501
Consumer Price Index (Food) (*1966=100) (+1976=100)	203*	223*	140+	159+	177+	198+

**Source: Statistical Abstracts of Punjab.*
Published by; Directorate of Economics and Statistics, Government of Punjab Chandigarh.

17. A Strategy of a Future Rural Hospital

*R. K. Rakshit**

I. Introduction

All hospitals round the world have common objectives to provide health care for all people. A hospital for today and tomorrow has become an issue in all nations, a personal issue to every citizen. It may not be out of place to remember Albert Schweitzer who did meritorious work at Lambarence, a rural area in equatorial Africa; his operated cases were lodged in huts built by the patient's relatives. Similarly Beaves, a British surgeon carried out extensive surgical procedures in a very simple and basic sett up and on a shoe-string budget when he worked in a remote part of Africa. The results of such work were very satisfactory.

In India, a developing country we have to think of a new strategy to provide hospital care to all its people irrespective of whether he is located in a city or in a village keeping in view that needs always exceed the means and this will be particularly true for countries with limited resources. Doctors in the rural hospitals feel that they are being treated in step-motherly fashion. Being the leader of the hospital team in the rural areas he himself is often frustrated due to poor knowledge of administration, insufficient prior exposure to managerial techniques, and acute resource constraints. Hence we need to develop a different type of doctor and health system suitable to our rural areas.

II. A Future Rural Hospital

One of the idioms in Maurice King's book is:

"Patients should be treated as close to their homes as possible in the smallest, cheapest, most humbly staffed and most simply equipped unit that is capable of looking after them adequately".

To achieve the above goal, the National Health Policy needs to be re-oriented so that a proper strategy for development of health manpower for service in a rural area could be so devised. This is feasible if the manpower development of rural hospitals is delinked from the urban health care system. There is a need to have a separate cadre of motivated people for the rural hospitals. To make this system viable, a separate budget is required to be apportioned which could be usefully utilised for this purpose only. Grass-root level training needs to be given to the doctors and para-medicals keeping in view the rural environment and the geo-medicine of the area. It is high time we realized that rural geo-medicine needs an integrated approach where allopathy, ayurveda, homoeopathy, unani and physical medicine are all made available. The doctor in this setup will be called Rural Physician. Rural physicians should have the basic 1 1/2 years

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training in preclinical medicine, and another 3 years in clinical medicine with the subjects as mentioned above. On completion of 4 1/2 years, they can go for higher specialisation in the subjects of their choice.

III. Planning & Design of a Rural Hospital

Based on the above, multidisciplinary hospital services comprising Allopathy, Ayurvedic, Homoeopathy, Physical Medicine, Unani should be planned which would provide:

- Domiciliary Services at the doorstep of villages in the form of mobile services
- OPD services
- Day-care services
- Diagnostic Services
- Indoor Services etc.

Therefore there is a need for a change in approach to hospital planning when one plans for a rural hospital, with appropriate stress on hospital volume, spaces and interior, so that the end product is more benign, wholesome and humane, something that is not merely technically sophisticated. The various units are to be so arranged so as to achieve maximum utilization of space without diluting the quality of care. In terms of architectural planning the hospital building should match the surrounding environment.

Hospital structure may be either horizontal or vertical. The latter will definitely be economical but for hospitals of smaller magnitude it may not be right since vertical construction would add to the cost of construction due to the requirement of lifts and ramps.

No amount of designing will be of use unless the hospital is self contained in terms of staff and equipment. Pharmacy services should include formularies of Allopathy, Ayurvedic, Homoeopathic and Unani depending on need of the geographical area. In designing hospitals, it has to be kept in view that the plan should be capable of absorbing reasonable expansion at a later stage. Lighting, ventilation and colour scheme, etc. which also play an important role in medicare are to be given due thought. In order to optimize the hospital space there is a need to rationalise floor space in the space module.

Besides rationalisation, space economy could be achieved by efficient use of various spaces and economise in building cost. A space may be suitably designed for performing more than one activity occurring at different times, e.g. a multipurpose room in outpatient clinic is also envisaged to serve as an accommodation for the domiciliary treatment staff during their liaison visit to the hospital.

IV. Conclusion

To provide hospital care to rural people, the strategy of rural health care system needs to be redesigned. Education of rural medicine should be imparted to all the cadres of providers of rural health. Such education centres should be located in rural environment. OPD and domiciliary services should get priority which may be curative, restorative, ,promotive, preventive or educative. Health

service cannot be a totally free service. It should be paid for by the patients on subsidised basis.

The hospital should be simple in design, easily approachable, identifiable and inexpensive to maintain, with inherent ingredients of flexibility for expansion when needed.

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18. Contraceptive Acceptance and Immunization Status in an Urban Slum

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I Introduction

The National programmes on health initially concentrated on rural areas. In view of the large increases in urban slum population following migration, it is now evident that equal emphasis is necessary to improve the status of the slum dwellers. A survey was carried out in an urban slum of central Bombay in Maharashtra State to note the utilisation of the family welfare (FW) services by the people.

There were several facilities available for rendering FW services and children's immunisation in the neighbourhood-clinics for women for antenatal and postnatal care, family planning advice and services and routine gynaecological check-ups. Public hospitals, municipal maternity homes, municipal dispensaries, centres run by voluntary organisations which are free or charge low fees, and private practitioners provide FW services in this area. Field staff of the Municipal Corporation and some of the voluntary groups move within the slum to motivate the people especially for immunisation and family planning.

In such a situation, one would expect that the utilisation of FW services would be high.

II. Methodology

A total population of 7136 from 1342 households was surveyed for details of socio-economic and educational status, immunisation of children and contraceptive use by the eligible couples.

III. Results

Of the total population of 7136, 40% were below 15 years of age and 14% were in the "under-fives" group. The data on triple, polio, BCG immunizations showed that 67.9% children had received complete course of immunizations while 16.2% had not completed the full immunisation schedule and 15.9% had not received any immunization.

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Amongst 1212 eligible couples in the surveyed population, the couple protection rate was 42.7, 39.9% adopted permanent methods of sterilisation, (98.1% tubal sterilisations and 1.9% vasectomies) and 2.9% used spacing methods. Permanent sterilisation was accepted by most couples after having more than three living children (59.8%); only 9.53% of those sterilised had one or two children, while 30.7% had three living children.

IV. Discussion

There is an increased effort by various groups working in urban slums to improve the health status of the slum population. A dense slum population with a strategic location in a central area, was surveyed with a fair number of facilities in the nearby areas. Nevertheless utilization of services was quite poor. The observation was that nearly 16% of the children had not been immunised against the common infectious diseases. The very low use of spacing contraceptives (2.9%) reflects that couples prefer to undergo permanent procedures which is also more acceptable after more than three children (59.8% such couples sterilised). Integrated strategies need to be devised to improve the utilization of the available health and family welfare services.

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19. Morbidity and Mortality of Newborns Delivered to Rural Mothers in an Institutional Hospital

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I. Introduction

Newborns delivered to rural mothers are at the risk of high morbidity and mortality because of lack of socio-economic development, scarcity of medical facilities, undesirable practices of rearing of newborns and delivery of health-care[1]. However, the exact magnitude of the problems in rural areas are not available[2]. So, in order to assess the approximate magnitude of morbidity and early neonatal mortality of rural newborns delivered to rural mothers in an institutional hospital a study was carried out.

II. Material and Methods

179 rural mothers and their single live newborn out of 1696 deliveries from January 1988 to December 1988 in J. N. Medical College, A. M. U. Aligarh (Institutional Hospital) served as material for this study. A detailed history and clinical examination of the rural mothers was done and babies delivered to them were

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examined in detail and their major morbidity were categorised as follows:

1. **Birth Asphyxia**: Babies were classified into mild, moderate and severe birth asphyxia by counting Apgar's score[3] at one minute.

	Apgar's Score
Mild	6, 7
Moderate	3, 4, 5
Severe	0, 1, 2

2. **Pre-Maturity**: Any newborn whose gestational age is less than 37 weeks[4] either on the basis of last menstrual period[5] or clinical criteria[6].

3. **Low-Birth Weight Baby**: Babies weighing 2.5 or less than 2.5 irrespective to gestational age.[7]

4. **Septicemia**: Any baby who has clinical symptoms of septicemia along with or without laboratory findings.[8]

5. **Hyperbilirubinaemia**[9]: Term and Preterm babies having serum bilirubin more than or equal to 12 and 14 mg% respectively.

6. **Respiratory Distress Syndrome (RDS)**[10]: Any newborn having either two or a combination of following symptoms:
   Respiratory Rate more than 60/mt
   Expiratory Grunting
   Subcostal Retraction

III. Results

Only 10.55% of newborns delivered in an institutional hospital were delivered to rural mothers, with male female ratio 1:1.06. The mean weight of male babies was 2.40 ± 0.55 kgs. and that of a female baby was 2.28 ± 0.46 kgs. However, the difference was statistically insignificant.

Tables 1 and 2 show the maternal age, gravida, and maternal morbidity. Majority of the rural mothers who delivered in this hospital were primi gravidas (46.60%) and teenaged (59.21%) while the commonest maternal morbidity was severe anaemia (29.05%) followed by prolonged labour (25.14%) and toxaemia in pregnancy (23.46%).

Tables 3 and 4 show the weight-wise distribution of newborns and neonatal morbidity. Majority of babies were low birth weight 55.86%, and the commonest morbidity of the newborns was birth asphyxia, 29.1%, followed by prematurity 25.31%, and RDS (15.28%).

Table 5 shows the immediate neonatal mortality of newborns. The commonest cause of mortality was birth asphyxia 44.64%.

IV. Discussion

179 rural newborns were delivered in an institutional hospital during the year 1988 which comprised only 10.55% of total deliveries. The overall morbidity of these newborns were 88.26% which is 9 - 10 times higher than in urban[11] population, which is probably due to delayed reporting of rural pregnant mothers to the institutional hospital for deliveries. As far as morbidity of rural newborns is

concerned, birth asphyxia was the commonest (29.1%), which is 2.5 to 3 times higher than overall prevalence of birth asphyxia, while prematurity and septicemia were quite high contrary to the urban population.

The immediate neonatal mortality of rural babies was 31.28%. Birth asphyxia accounted for most of the rural neonatal deaths (44.64%), while remaining causes of death in newborn were septicemia (37.5%) and prematurity (17.86%) which is higher than other studies.

In conclusion, the neonatal deaths of rural newborns in this hospital were mainly because of birth asphyxia, septicemia and prematurity. This underlines the importance of special care required for the above conditions at rural level which can be imparted by re-orientation of rural medical and paramedical staff regarding antenatal and intranatal care. This training can be carried out at the neonatal units of institutional hospitals in collaboration with obstetrician and neonatologist.

Table I
Maternal Age and Gravida Wise Distribution

Primi	-	87	-	48.60
Second	-	32	-	17.88
Multi	-	60	-	32.52
Age				
< 20 years	-	106	-	59.21%
20 - 25 years	-	35	-	19.55%
25 - 30 years	-	25	-	13.97%
> 30 years	-	18	-	10.05%

Table II
Maternal Morbidity

Toxaemia in Pregnancy	-	42 (23.46%)
Prolonged Labour	-	35 (25.14%)
Hand Prolapse	-	15 (8.38%)
Retained Placenta	-	17 (9.4%)
Severe Anaemia	-	52 (29.05%)
Jaundice	-	8 (4.6%)
> One Problem	-	10 (5.59%)

Table III

Weight Wise Distribution

<1000	-	04	2.23
1001 - 1500	-	17	9.49
1501 - 2000	-	32	17.88
2001 - 2500	-	47	26.26
2501 - 3000	-	62	34.64
3001 - 3500	-	12	6.70
3501 - 4000	-	05	2.79
>4000	-	00	0.00

Table IV

Neonatal Morbidity, 158 (88.26%)

Birth Asphyxia	-	46	29.1%
Septicemia	-	29	18.35%
Prematurity	-	40	25.31#
Neonatal Hyper-bilirubinaemia	-	18	11.39%
RDS	-	25	15.82%
Normal	-	21	11.73%

Table V

Neonatal Mortality

56 (31.28%)

Birth Asphyxia	-	25	44.64%
Septicemia	-	21	37.5%
Prematurity	-	10	17.86%

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20. A Strategy of Mother and Child Health Care in a Tribal Community

*Sumathy S. Rao**

I. Introduction

Health programme should include Maternal and Child Health, Family Planning, education on prevention of sexually transmitted diseases including AIDS, and a referral system for their diagnosis and treatment. Tribals owing to their peculiar way of life distinct from the urban and rural populations, have different type of health problems which need to be studied, priorities established, and a suitable programme of care should be devised for them.

II The Tribal Community Included in the Study

In Tamilnadu, four Districts have hilly and backward areas, with tribal communities living in isolated settlements in the forest. In Coimbatore district, nearly seven primary health centres have substantial tribal populations. The Coimbatore Irulars live in about sixty forest areas. 2655 Irulars were included in the Tribal Health and Welfare Survey. At the time of survey blood samples were taken to identify positive causes of STD and as well to study overall total morbidity and identify other vital diseases affecting the tribes. The objective of the study was to develop a suitable Mother and Child Health Care strategy.

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III. Survey Findings of Morbidity and Health Behaviour of the Tribals

The Irulars in general, men, women and children are healthy and by appearance they are stout and dark. It was found that 70% of the population suffer from water and food borne diseases and worm infections, and 40% with skin and STD. The age-sex distribution of the population studies is shown in Table 1.

Table 1
Age and Sex Distribution of Population

Sl. No.	Age Group	Males		Females	
		Number	%	Number	%
1	0 -1	45	3.3	47	3.7
2	1 - 4	115	8.3	95	7.4
3	5 - 14	367	26.7	330	25.5
4	15 - 54	723	52.6	704	55.0
5	55 and above	125	7.1	104	8.1
Total		1375	51.8	1280	48.2

Among the total population of 2635, males were slightly more than females in number. Interestingly, between the age group of 15 - 54 with major health problems, the Irular females outnumbered males. Table 2 shows the morbidity pattern. Among the age group of 5 - 14, both male and female children suffered from malnutrition, diarrhoea and other ailments. Therefore, there is a need to improve the health status of this group. Health education regarding this age group was carried out to prevent diseases and improve environmental sanitation and water, and introducing nutritious food rich in protein.

Table 2
Distribution of Morbidity by Age and Sex

Type of Disease	Age group in years	No.of persons included	Number	Prevalence %
Diarrhoea	0-1	92	39	42.4
Malnutrition	1-4	210	80	38.0
Worm infestation diarrhoea, Malnutrition	5-14	697	430	61.7
Upper respiratory, skin diseases, STD, Gastro-enteritis	15-54	1447	340	23.5
Geriatric Problems	55	289	65	22.5
Total		2635		1454

The major diseases are infantile diarrhoea, malnutrition, upper respiratory infections and other infections, STD, skin and geriatric problems. The prevalence of nutritional deficiencies among the age group 0-14 were so high that health education on nutrition formed the basic strategy followed by intensive education and motivation for control of, infectious and skin diseases, worm infestation, STD and other diseases. About 300 cases reported STD symptoms, a physical and blood examination was carried out for them. Six cases were VDRL positive out of a total of 45 blood samples drawn from males and females who were willing for the test. Resistance to be examined and undergo blood test was very high and the health staff had to convince the affected individuals with the examples of cured cases who reported earlier. One male and five females were found to be positive. Based on the socio-cultural aspects individual treatment was begun along with counselling and follow-up.

Since polyandry is being practised, both men and women were the target for STD. Chancroid and gonorrhoea was commonly prevalent, followed by excessive white discharge and ulceration. Almost all reported cases have had treatment from quacks and few did not take any treatment and thus led to cases becoming worse.

Since the intake of nutritious food is limited, the Irulars suffered from clinical signs of nutritional deficiencies. Infant mortality rate was high and the maternal death rate was 5% (not analysed). The family size norm was four to five. The mortality and morbidity was attributed to neglect of antenatal, intranatal and postnatal care.

IV. Health and Education Strategies Used

It was recognized that STD was a priority problem and important area for prevention. The tribal community which is fairly reserved population needed mass media for education. It has therefore become necessary to educate the mothers who were highly ignorant and innocent. Awareness of preventable diseases through mass media was used, followed by individual contact.

From the baseline survey findings, it was decided that health activity was to be integrated with tribal welfare activity. Since the Puluvapatty PHC has mobile health services, the staff met the tribal population in their settlements and selected the Moopans as Health Volunteers for each settlement. All the Moopans were taken into confidence regarding welfare activities to be conducted and were requested to spread the knowledge to the other Irulars. A Welfare Committee was formed with the assistance of the local forest guard and forest watcher.

The PHC staff visited the Singipathy area fortnightly when the Moopans were requested to assemble to discuss on health and other welfare matters. The minutes of the meeting were maintained by the tribal welfare school teacher who acted as a liaison officer between health and non-health officials on the one hand and the tribals on the other. Talking to women, group talks to women by female health workers, involving them in the nutrition demonstration programme, educating them on DDK (Disposable Delivery Kit) and ORS formed an important activity. Social workers from the voluntary agencies and the Public Health Nurses were involved to tackle the cases of STD.

V. Results of the Health Education Strategy

Since the commencement of the health project in 1985 through Primary Health Centre, Pulluvapatti, there have been few deaths due to gastroenteritis in Singapathy and Anjupathy which are covered by the PHC. Irulars usually do not receive treatment from outside. For ordinary fevers, they go to Moopan and get the herbal medicines. Awareness of taking modern medicines from the health staff has begun due to establishment of Health Subcentres in the hilly areas with multipurpose male and female workers. Gradually the Irulars took treatment from the mobile health teams for minor ailments. Maternity services were not utilised. The women used to be left alone during the delivery time. After the birth of the baby, the men rejoice together. Special ceremonial functions are held when a male child is born. There is no traditional dai system among the Irulars. Child rearing practice is fairly good. Infants are with mothers both at home and at work. In the first four to five months infants are given bread, milk, ragi or maize porridge. Rice is given very rarely.

Looking at the Irular's attitude, there have been tremendous changes in their socio-economic, cultural and economic activities. They want their grievances to be heard by Government for further development. They now keep in touch with the people of the plains to know the current socio-economic development. There is increased awareness of Government projects. Knowledge, attitude and practice level had increased due to the guidance of visiting officials. Education helped the tribals to understand the problems of the diseases and thus get involved in an useful way. The health programmes and self reliance improved their condition and their involvement increased. Women and men are able to form separate groups to work on problems of MCH, STD and diarrhoea.

VI. Future Plans

The Irulars around Singapathy area have decided to convene the Welfare Committee meeting monthly, meet officials frequently to present their grievances and thus improve living standards. Symptoms of STD are to be discussed among the tribes for taking early treatment and identify cases at an early stage. The committee left the final decisions to the people on the coital frequency, practice of polyandry and illegal contacts with the plains, which influence the development of STD.

The above plans were detailed and entrusted to the "Lamp Service" and health staff who will continue to support the total welfare of the tribal community.

VI. HEALTH MANPOWER PLANNING, DEVELOPMENT AND TRAINING

21. Training and Health Manpower Development - A System's Approach

*Ashok Sahni**

I. Introduction

This paper briefly discusses a system's approach to health manpower, training and development in order to make the training more relevant and to improve the health care services in the rural areas and urban slums.

The medical education, research and training constitute the vital areas of the total health care delivery system in India. Since independence, particularly with the advent of the first Five Year Plan, high priority has been given to quality of medical education, basic and applied research in health sciences and training for equipping the medical and paramedical personnel with appropriate skills to improve the quality of life of the people. A large number of national level and state level institutions have been established for training various categories of health manpower. Besides the governmental institutions, voluntary, private and missionary institutions have been established in the urban and rural areas in India to train various categories of health manpower. Besides the formal and long term training programmes, a number of public and private sector institutions have been established to conduct short term continuing education programmes for upgrading skills of the personnel as well as professional development of the health personnel. The Seventh Five Year Plan laid great stress on training and development of health personnel, specifically attitudinal and occupational training. The draft Eighth Five Year Plan has further stressed the importance of rightly trained people with appropriate motivation, attitudes and commitment.

II. A Systems Approach to Training and Development

In order to train the right people for the right kind of behaviours, with expected right performance so as to ultimately make the health systems more effective and contribute towards a better quality of life, the following systems approach is suggested for implementation at national, state and institutional levels.

1. Health System - Organisational Analysis

We would need to begin with an analysis of the present health system at national, state and institutional levels. These would require establishing the short term and long term goals and objectives. In other words, what are the health needs of the people at National level? District level? State level? What are the morbidity and mortality patterns? What are the resources? What are the gaps in

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health policies and programmes with regard to the felt needs of the people vis-a-vis the thrust of the present health programmes. This would require a conscious analysis of the present national and state level policies and programmes. Is Health For All by 2000 A.D. or 2050 an objective of the National Health Policy? Is primary health care truly a national strategy for health care delivery for the urban and rural people in India? Whose responsibility is it to provide health care? Centre? State? Public Sector? Private Sector? What is the health profile of the Indian people as a country, State-wise, district-wise and even village-wise?

2. Operational Analysis

What changes do we expect, keeping in view the above analysis with regard to curative, preventive, promotive and rehabilitative services? What changes are needed in the information system for effective planning and decision-making and by whom? What should be the systems of allocation of resources - political or rational or need based? What would be the nature of materials and equipment required to meet with the emerging health needs? What should be the pattern of the community participation and involvement of voluntary agencies? What would be the future patterns of changes in the urban and rural population? What would be the changes in policies and programmes for urban and village development?

3. Unit Level Analysis

In the light of the above operational analysis, we would need to decide as to the role of the district health institutions, community health centres, primary health centres, and subcentres with regard to curative, preventive, promotive and rehabilitative services. This would also require the integration of the traditional and modern systems of medicine and health care.

4. Manpower Analysis

In the light of the unit level analysis, we would need to have manpower planning systems to determine the quantitative and qualitative requirements of various types of health manpower at national level, state level, district level, taluq level and even at village level. Where would this manpower come from, public sector, private sector or voluntary sector? We would also need to decide as to who should deliver what kind of service?

5. Training Need Assessment

In the light of the manpower planning and requirements, we would need to make an assessment of the training needs. This would require assessment of the technical and behavioural skills of the various categories of manpower? What are the gaps in knowledge to perform the present job and the future job keeping in view the career growth of the employees? We would need clearly to establish whether the training is needed at a cognitive level - (technical knowledge and skills), or behavioural and motivational level (attitudes, motivation, communication skills, interpersonal relationships, supervision, resources mobilization, community participation, leadership, conflict resolution).

6. Planning the Training Programmes

In the light of the gaps in knowledge and the requirements, we would then need to design the training programmes at various levels, with regard to the content, duration, methodology and resources. We would need to establish as to

who should be the trainers and what should the capabilities and skills of the trainers as well as the resources of the training institutions. We would also need to establish the methodology for training.

7. Evaluation of Training Programmes

In order to make the training programmes effective, we would need to evaluate these training programmes on immediate, intermediate and ultimate criteria of these programmes. Ultimately, the training programmes should lead to better performance, better adjustment of employee which in turn would lead to promotion of better health and minimization of health problems - morbidity and mortality and adoption of family planning practices. For this we would need to establish clear methodologies, processes and institutional responsibilities (internal or external for evaluation of the training programmes).

If the above systems approach to health manpower training and development is implemented, this would lead to more competent, committed and motivated health personnel at various levels of the system towards health and development of the country.

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22. Manpower Planning and Training of Community Volunteers

*Solomon G. Victor, M. Devasahayam and Rajaratnam Abel**

I. Introduction

RUHSA Department of the Christian Medical College and Hospital was started in 1977 and the programme has been established in the K.V.Kuppam block, North Arcot District, Tamil Nadu, with a population of 104,000. In addition to the Government services, health services are provided by the RUHSA Department.

II. Health Manpower of the RUHSA Peripheral Units

For the purpose of service, the block has been divided into 18 Peripheral Service Units (P.S.U.) of 5000 - 7000 population and one Rural Community Officer (R.C.O.). The RCO is supported by the community volunteers who are selected by the community and from the community. The health services are

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being rendered by the two different category of women volunteers - one woman Health Aide and about six Family Care Volunteers per peripheral service unit.

The family care volunteers are the grassroot level workers each looking after a 1000 population or 200 families. They are between 35 to 60 years of age and about 80% of them are illiterate who carry out the grassroot level work in MCH care and basic primary health care. Some of them are trained dais of the area. One health aide in each peripheral service unit supports FCVs. The health aides are again local women who would be helping the FCVs in their work. Health aides are those who have completed high school and in the age group of 18 to 35. Besides guiding the FCVs, the health aides record different vital events reported by the illiterate FCVs every week, and send a consolidated report to the CSU.

Women organisers are full time local volunteers involved mostly in activities related to the social and economic well-being of females in every PSU. Unlike FCVs, Women's Organiser has to cover all the 5000 to 7000 population in her PSU. Every PSU has a woman organiser who would work in close collaboration with the FCVs of the PSU. This helps to circumvent the mobility problem of the former and also helps in integrating health education into women's development/ education. FCV is of vital help to the women organizers in organizing Mahila Mandals and other meetings.

Many FCVs are illiterates who are susceptible to miss vital events to be informed to the Health Aides at certain times. Yet past experiences shows that wherever these women volunteers work together in a close knit manner it has paid dividends in terms of more mothers bringing children for immunizations, improved ANC coverage, women starting income generation activities, high acceptance of temporary methods of family planning, etc.

III. Training

Every new FCV is trained for a period of six weeks at the CSU, RUHSA on Primary Health Care, after which she should be given training once in a month. During that period, FCVs having difficulties in grasping the subjects are identified and given intensive followup till they gain confidence in delivering health services in the field. At the PSU level, planning and review meetings are organized by the respective RCOs with the Health Aide, Women organiser and the FCVs.

Study tours also have been arranged once, in 1986, so as to give these local volunteers an exposure to other voluntary agencies and personnel involved in the promotion of health and development for women and children.

IV. Incentives

Besides the honorarium given to them for their part-time work, which ranges between Rs.30/- to 100/-, other incentives are also given under various circumstances. Poor people referred by them to the weekly mobile clinic at the PSU or to the CSU health centre are given medical care free of cost. For referring polio cases, some prize is given of the value of Rs.15/- per case. Besides this, for every case motivated for permanent method of family planning, the Government gives an incentive of Rs.50/-. Recently when RUSHA got the LISZ award for health

education in 1986, each FCV was given a prize to the tune of Rs.50/-. Further, deserving FCVs have been made beneficiaries of passing on the gift scheme wherein exotic/cross breed goats would be given to them, one progeny of which has to be given to another beneficiary in the neighbourhood.

V. Participation in other activities

Two FCVs have been office-bearers of women's cover making programme in the field. In the women's bank, the president, vice president and the secretary roles are delivered by the health aides. FCVs and health aides helped extensively in identifying the poorest priority families in the block and also in the delivery of economic schemes for their betterment.

VI. Results

The changes in the overall health and nutrition status in K.V.Kuppam block is shown in the following table. Data is available for the period of the programme.

	1983	1986	1988
Birth rate	22	22.9	N.A.
IMR	65	65	N.A.
% U5 children	9.7		N.A.
Crude Death Rate	8	9	N.A.
Polio	12	4	Nil
Pertussis	72	10	8
Measles	160	31	55
Nutritional Status			
Normal	10.8	N.A	11.7
Grade I	44.7	N.A.	45.4
Grade II	39.1	N.A.	40.1
Grade III	5.4	N.A.	2.8

Interestingly there is no significant difference between under 5 male and female children in their nutritional status.

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23. Manpower Planning, Development and Training of Community Level Staff and First Level Supervisors

(Abstract)

*S. R. Salunke**

The increasing demand for medical and health care services in the face of limited resources has brought out the need for careful planning and management of health services.

The current objective of the national health programme is to strive towards the goal of health for all by the year 2000 A.D. through primary health care. The state of Maharashtra is determined to achieve the goal by the end of 1990.

Training is a tool which equips health functionaries with knowledge and skills necessary to perform their jobs more effectively resulting in better performance both qualitatively and quantitatively.

It was altogether impossible for the four HFWTCs of Maharashtra to undertake orientation training and retraining activity at an interval of 3 years for all the health functionaries of PHC level, namely, medical officers, health assistants and multipurpose workers. Hence, a local training unit at district level was organized in each district by withdrawing staff from various cadres. The District Training Teams had the following members.

1. Medical officer Cl-II
2. Senior Sanitary Inspector/sanitary inspector
3. Co-ordinator/block level supervisor
4. Non-medical supervisor (Leprosy)
5. Malaria Surveillance Inspector
6. B.C.G. Team leader
7. Nurse Midwife/Lady Health Visitor

The experience of District Training Teams is very encouraging in the state of Maharashtra and orientation training of Male and Female Multipurpose Workers at three years interval is being conducted successfully within the district by the local unit of District Training Teams.

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*Dr. S. R. Salunke, Jt. Director, Directorate of Health Services, Maharashtra

24. Basic Issues and Real Challenge: Health Manpower Development

(Abstract)

*D. B. Ray**

The underlying obstacles to primary health care are not really economic but rather political. Changes in the health scenerio could come through organised action of the people themselves and by restructuring the social order towards fairer distribution of wealth, resources and powers. Health professionals, one percent of the world's population with university degrees are in some ways part of the inner circle of the inequitable existing social order that perpetrates poor health. With acceptance of primary health as a human right the role of the health worker will be to adopt a human empowerment approach facing more comprehensive political problems of oppression and injustice, apathy and misguided good-will. The real challenge in programmes of health manpower development is to initiate attitudinal change among health workers to serve the people as per their needs and on their terms. Will the future health manpower be able to muster courage and commitment to side with those who are at the bottom?

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VII. INVOLVEMENT OF PEOPLE IN ENVIRONMENTAL, PREVENTIVE AND PROMOTIVE HEALTH AND OTHER DEVELOPMENTAL PROGRAMMES TO PROMOTE SELF-RELIANCE

25. Towards Health Care Directed for Social Transformation (A Real Life Experience)

*Sister Agnesita**

(This is not a research paper. This is based on my re-search to make the medical profession relevant and useful to society)

I. Introduction

Lakshmi, a village health worker advises the people of her village to drink clean water. She also tells them how to prepare and use oral rehydration fluid in case of diarrhoea. They ask her, Have you forgotten for the moment that we have no drinking water in our village and that the pond from which we collect water will be dry soon?

Shantha gets intermittent slight bleeding during her fifth and sixth months of pregnancy. She goes to a medical college hospital. They admit her. After four days she is discharged with a diagnosis of threatened abortion. She returns to her village which is 35 kms. away. She starts bleeding profusely at night. There is no bus service in the village. Her people manage to take her in a bullock cart to the nearest primary health centre which is 15 kms. away. There is no doctor available. Meanwhile, Shantha is in shock. They desperately knock at the door of a private doctor. Shantha is dyspnoec by now. Fortunately she aborts spontaneously, not a foetus but a vescicular mole. The doctor administers three bottles of intravenous fluids and some injections. In the morning, the family is given a bill for Rs.600/-. They pawn a few vessels that they had for Rs.300/- and the rest they borrow for a high interest rate. They pay the doctor and take Shantha home, even though she is still dyspnoec and not yet out of danger.

Fifteen people are admitted in a district hospital with injuries resulting from being beaten up by their landlords for asking a small increase in their wages. They work the whole day. But, their families suffer from semi-starvation. I wonder what advice will be written on their discharge summary sheet!

All the above examples are taken from real life situations. They are not examples but incidents in the lives of people whom I have met. These are the

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daily experiences of 60-70% of our population. Can our prescription and drugs restore them to health? Can intervention at the individual level and on the physical level give them wholeness as defined by WHO?

II. The Health Education Approach to Primary Health Care

In these circumstances I started a health education campaign and mobile clinics. Be clean. drink clean water, eat a balanced diet. Such were my slogans. After a few visits to the villages, I could hear their feeble voices protesting, Doctor sir, what we need desperately is not medicine, but water to drink and food to eat. We want to be clean. Our women walk 1-2 kms. fetch a pot of water. We have only one room huts. Where else can our children play and run about except in the muddy and slushy streets of the village? You ask us to eat a balanced diet. We work almost whole day and yet our wages are so meagre that we cannot even buy grain sufficient for a full meal".

This was the same story in hundreds of villages around my health centre; I felt very foolish. Can vitamin tablets satisfy their hunger and cure their malnutrition? Can ORS eradicate the repeated attacks of diarrhoea? What was I doing through my health education campaign? I was trying to conceal the real cause of the illness. The fact is that the poor are forced to lead unhealthy lives because of their poverty, which itself is a result of the exploitative and unjust practices of society. Uncritical acceptance of health messages conveniently removes the responsibility for ill health from those who exploit and instead place the blame on the very people who are victims of this exploitation.

III Socially Relevant Action for Primary Health Care

Fortunately, the people of these villages were not passive altogether. Their hungry stomachs and empty hands revolted against my health messages. I had top climb down from my ivory tower. We sat down and talked together. We evolved a health programme, a health programme which would take into consideration the societal factors that contributed to and perpetuated ill health, a health programme that would treat not only individuals and their bodies but that would also organise people's effort in order to bring about structural changes in society so that they could lead healthy lives. This was acceptable to them. They would select a woman from their village to be the health worker of their village. Here again, it was not the village leaders or panchayat presidents that were involved in selecting these health workers. These women chosen by the villagers were just like any other women of their villages, except that they were willing to learn and to be of help to their people.

Their initial training included, like any other health worker's training programme, a basic knowledge of hygiene and nutrition, treatment of minor ailments, first aid, prevention of diseases and communication skills. However, the training programme also included an analysis of the structure and functions of society in all its various aspects. The trainees became aware for the first time that they need not be slaves to their poverty and their united organised effort could bring about some changes fundamental to their lives. They did not need any statistical or research data to realise the connection between poverty and dis-

ease. They also realised that their poverty was not an inherited quality but a condition imposed upon them by a few rich and elite group of people who exploited and dominated their lives and work.

Besides being the health workers, these women were to organise women of their villages and form women's associations. The health worker taught them hygiene and nutrition, treated minor ailments, demonstrated the use of locally available food stuffs and most important of all, they discussed together the wage problem which was one of the root causes of their poverty and undernutrition. They tried to find out whom to approach for a well and a pump for drinking water, as lack of sufficient clean water was the cause of diarrhoea and skin diseases. These were not easily achieved. Who can blame the people for their lethargic, fatalistic, slavish attitudes when, for centuries in the name of religion and caste they had been exploited and subjected to various forms of injustice? The health workers used different methods. Besides the group meetings and discussions they used cultural programmes, street theatre techniques, and puppet shows in order to bring the group together and to awaken their sense of dignity and self-respect. Within a year the groups were sufficiently motivated. They planned their own action programmes. A newly elected MLA was welcomed with empty pots instead of garlands and flowers, in order to demand drinking water for their village. The wage problem was not easy to tackle. The landlords were too powerful even for a whole village. So, the health workers of adjacent villages mobilized women of 5-6 villages. At a critical time of the harvesting season, they refused to work and prevented people from other villages from coming to work in their area. They did succeed! They were no more afraid of police and police stations. Basic legal knowledge also was given to them. They demanded land ownership. In short, these harijan women who were like slaves even in their homes came out of their homes and villages and organised their efforts. Though illiterate and poor, they went to government offices and demanded that the government schemes be implemented in their villages.

Most of the harijan colonies did not know that there was a government health worker who was supposed to visit their villages and make health services available to them. Usually these government health workers went to one or two rich families in high caste area and compiled their reports. Harijan families did not know about their existence. Our health workers contacted the government health workers through the primary health centre. Together with other women of their villages, they insisted that the government health worker visit their villages regularly and carry out the immunization programmes and other health programmes that they were supposed to carry out. Because of the insistence and demand of the people, these programmes are now carried out in these villages.

India has a National Health Policy that hopes to achieve health for all by 2000 AD. According to the recommendations of various committees, every Five Year Plan does increase the number of primary health centres and subcentres, thus decreasing the PHC/population ratio as well as subcentres/population ratio. There are more than sufficient medical colleges in our country. The doctor availability has been approaching ideal levels. Our medical college and research institutions are equipped with most modern and sophisticated diagnostic and other medical gadgets.

However, until consciousness is built up from below and unless the implementation of demands start at the lowest levels, the health status of our villages cannot be improved. This was the reason why I evolved a health programme as I described earlier. Along with the usual health programme, the health worker seeks a solution to the root causes of illness. She mobilises people and seeks to improve their economic condition by appropriate action at the social level.

The real issue is: Does the health action increasingly enable the labouring poor to expect, demand and obtain the health care services which the government professes to be their right? Do the health activities concretely redress the economic roots of ill-health? Does the local health action contribute in a concrete way to change in society? But what happens in reality? Instead of finding out the optimum food requirements to keep a man healthy we fix minimum calorie requirements for a sedentary worker. We grudge him even this on the excuse that his body weight is less than normal and because of body adaptive mechanisms. The tragedy is that the people for whom these minimum wages are prescribed are the very people who carry heavy loads, who break stones in quarries, pull heavily loaded carts and do the heavy manual tasks in agriculture. For such work, the calorie requirement is much higher i.e. 3900 calories per day. Even if these workers were to get 2400 calories everyday and technically be above the government's poverty line, they would still be undernourished with a deficit of 1500 calories. Another example - our country passed excellent legislation on land reforms. If translated into practice it would have improved the economic standard of our people and consequently their health status, as happened in Kerala. However, we know very well that, except in Kerala and perhaps to a small degree in some other states, the land reforms remained unimplemented. Reason? It is quite obvious? Our legislative assemblies are filled with the land owning and power weilding elite.

I point out these obvious facts to highlight the intrinsic relationship between health and the economic-political system of the country. "As part of a highly educated, elite, professional group, we doctors have our own assumptions that we best understand society's health needs and should therefore control to a major extent, the shaping of health services, that a doctor's responsibility lies at the individual level and he need not take into account broader considerations of societal responsibility". The germ theory, microscope and antibiotics bestow on us the confirmation that we seek. One of the examples how we, doctors control the medical system is that we have the sanction for private practice and the people have no say in the matter. The poor come from long distances to district hospitals and medical colleges and find that all big doctors are already gone by mid-morning to their nursing homes and clinics.

IV. Conclusion

We can go on enumerating these examples. Can we call our medical system as the health system for our people? How long can we go on with the policy, 'a pill for every ill'? Are we ready atleast to acknowledge the essential relationship between health and the socio-economic and religio-political structures of our society? Can we find a health system that has taken into account all these factors? Can our health interventions penetrate all these social systems of today? Is there

any hope for our people, unless this elite oriented, urban blessed, doctor and drug-based, top-down health system is changed?

We succeeded at micro level in 30 villages and the wave is spreading to nearby villages. This experience has taught us what a few illiterate women committed to their cause on achieve. Can we professionals give them a helping hand by our effort to understand the mechanism of their ill-health, by demystifying medical knowledge, by dissociating ourselves from multinational drug industries, by having the intellectual honesty to acknowledge that the present medical system perpetuates and promotes the unjust social structures, and finally, by using the great power that we wield as a professional group, to create and to demand the political change that will bring about the health policies in favour of the poor??? Then we will be true to the noble tradition of the medical profession which loves humanity in its entirety and WHOLENESS.

VIII. APPLICATION AND USE OF APPROPRIATE TECHNOLOGY

26. Application and Use of Appropriate Technology

*K. Indirabai**

I. Introduction

The term appropriate technology refers to those products and procedures that are closely matched to the needs, resources and cultural framework of the users. It includes both hard technologies, such as equipment and supplies, and soft technologies such as procedures, educational materials and record keeping systems. Planning, management, training, monitoring and evaluation systems are vitally important for application. Technology, like health itself, is therefore something people have to do.

To be appropriate, a technology ought to be effective, culturally acceptable and valuable, affordable, sustainable locally, possessive of an evolutionary capacity, environmentally accountable and politically responsible. It may be unwise to alter an existing balance in a way that might be counter-productive. For example, to encourage minimally trained health workers to take too great an initiative, without first making sure that influential medical leaders in the area favour this delegation of duties and will help the health workers if they run into difficulties, is usually a counter-productive procedure.

II. The Critical Role of Women

Within their families and through their formal and informal organizations, women play a particularly critical role in the adaptation and application of appropriate technologies relating to primary health care as mothers, food-growers and cooks of the family and as the birth attendants assisting each other in this event. Clearly, if appropriate technologies for PHC are to be successfully applied at family and community levels, women need to be involved in decision making and their important status must be recognized.

Currently, GOBI-FFF activities are increasingly recognized to be vital forces for the improvement of maternal and child health and survival. The realization that, when integrated with development strategies, GOBI-FFF and nutrition related technologies could have a dramatic effect on nutrition, is perhaps the most exciting proposal for action in the reduction of malnutrition that has yet been put forward.

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III. Participatory Communication for Health

Conventional information, education and communication (IEC) methods do not adequately reflect the participatory nature of communication. The term IEC in the context of PHC programmes should be replaced with more appropriate terminology, viz., Participatory Communication for Health.

Participatory communication must be a continuous process of interaction between health workers and the community. Participatory communication programmes must, as much as possible, be built on traditional communication structures, systems, beliefs and practices. There is need for participatory evaluation at all phases through continuous feedback from, and dialogue with the community. Also more attention needs to be given to sharing results with other communication planners.

Training for participatory communication must be made widely available at all levels, including international and regional levels. Development of participatory communication training programmes, including re-orientation of health personnel within each country is strongly advocated. Recognizing that participatory communication for health is the most important component of PHC, there is need for enhancement and more realistic financial resource allocation.

IV. Conclusion

The success of the primary health care strategy to achieve the goal of health for all will depend to a great extent, on our success (or failure) to demystify health knowledge and to transfer appropriate health technologies sufficiently to empower family and community members to promote, protect and care for their own health.

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27. Maternal and Child Care through Appropriate Technology in the Community

(Abstract)

*P. Chandra**

There has been a drastic expansion of community health infrastructure and personnel. Still the status of mothers and children is awfully bad, with high maternal, perinatal and childhood mortality. These are neglected tragedies, because those who suffer are the poor, rural people and above all women and children. We have tried to improve Maternal Child Health Care through the following programmes.

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1) Improving Maternal and Child Health - Rural Health Welfare Programme of Christian Rainy Hospital (20,000 population), Church of South India, Royapuram, Madras-13 (A collaborative programme with an NGO) from 1979 to 1985.

2) a) Experimental training in upgrading knowledge and skills in MCH Care of all Health & Welfare functionaries :

b) Building up of MCH referral services:

Service cum research programme in Sendamangalam Community Development Block and Belukurichi Primary Health Centre (80000) population Tamilnadu under the DANIDA (Danish International Development Agency) assisted Tamilnadu Area Project of Health and Family Welfare 1982-84.

Upgrading the skills of Traditional Birth Attendants - 1985
Management of ARI in a rural community - 1988 to date
Infant Mortality & Morbidity in an urban community - 1985 to date

Our success in these small scale projects shows that these principles can be applied at national and global levels.

IX. INFORMATION, EDUCATION AND COMMUNICATION FOR SOCIAL CHANGE

28. Information, Education and Communication (IEC) for Social Change - A Case Study

*Tommy Varghese**

I. Introduction

Social change is the process of modification of the agreement of the society on its beliefs, values, norms and so on. In the field of health, social change is directed towards demystification of medicine, development of people to decide their own needs, elimination of superstitions and active participation of the people in the health delivery system. (Social change can be achieved through information, education and communication. The bigger the organisation, the larger is its need for the above).

II. An Experiment in IEC for Health

Such an experiment was conducted by the under-graduate cadets of the College of Nursing of the Armed Forces Medical College, at a remote village near Pune. Their idea was to educate the people of that village on the basic principles of community health with special reference to MCH for social change. They selected role play as the medium of communication.

'CORE' village is situated about 20 kms from Pune. The total population is about 1300. Most of the people are farmers. Educated people are few. The general socio-economic status of the above village is comparable to that of any other village in India.

The initial survey showed that the people have limited understanding about MCH. Like other villagers in India, they too had many misconceptions and superstitions. Daily visit to the village for a month helped the students understand the villagers, their living conditions, habits, customs and social attitudes. With help of the village sarpanch, educated women and the ever willing staff of the nearby primary health centre they were able to chalk out the best suited channel of communication. That is how they selected 'role play' (socio-drama) for health education. Villagers like drama. They can identify themselves as the script was in Marathi, the students learnt their local accent and presented it in a true pastoral background. They also had to dress up like common village folk.

The theme enacted was that of ante-natal care and immunization. A family scene with a pregnant daughter-in-law, a superstitious mother-in-law, an ignorant husband and an acceptable local nurse, made a suitable representation to communicate the message effectively. The picturisation of the sufferings of the

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victims of preventable childhood diseases kept the villagers spellbound. Subsequent door to door visits paved the way for improving the rapport with the villagers and clarifying their doubts.

III. Discussion

How much did the villagers understand the message after two months? A survey was again conducted among those who attended the role-play. Nineteen questions were asked. Eighty percent of the audience replied questions correctly, against the 40% of the pre-experiment survey.

Had their awareness given rise to change in attitude? Though it is too early to comment just after two months, the staff in the nearby PHC claim that there is a proportionate increase in demand for ante-natal care and immunization compared to the previous years from the same village.

According to Keith Davis[2], change produces a pressure effect on the whole organisation. Changes which would be occurring with health education are known to occur slowly. This kind of slow pressure produces lasting change without breaking the organisation. A small graft of social change on the society may develop into a mass movement in due course of time.

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2. Keith Davis : *Human Behaviour at Work - Organizational Behaviour,* Tata McGrawHill Publishing Company Ltd., New Delhi 1981

29. STATE-OF-THE-ART : A Study of the IEC Training Project In Rajasthan

Rameshwar Sharma, S. D. Gupta* and Mridula Mauria**

A study was recently conducted in Ajmer, Bhilwara and Pali districts in Rajasthan, with the objectives of understanding state-of-art of the IEC training project, its organisational dynamics, and levels of development, and, critically analyse processes and progress in the essential components, i.e. training, visits, supervision and monitoring.

The study revealed that the visit schedules by the peripheral health workers were prepared and followed to a large extent, thereby helping in increasing the predictability and regularity of the visits by health functionaries. However, in most instances, it did not synchronize with the supervisors. The workers were conducting the visits but planning of activities was not evident. The training activities in IEC, especially the initial training was done for DSTTs, BSTTs and for all other levels. However, regular training was infrequent.

The village level link persons, one in 20 households were envisaged. The link persons have been found to be useful in establishing the link between people and the health functionaries despite limitations in their selection and training.

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List of Priced Publications

I. Annual Conference Reports

1. Health For All by 2000 A.D. (1980)
2. The Role of Hospitals in Health Care (1981)
3. Health Manpower for 2000 A.D. (1982)
4. Role of Health Administrator in India (1983)
5. Financing of Health Services in India (1984)
6. On Growing Needs of Urban Health Management (1985)
7. Cost Reduction in Hospitals and Health Care (1986)
8. Health of the High Risk Groups: Mothers, Children and Elderly (1987)
9. Health of Women and Children for Development (1988)
10. Health Care for the Villages and Urban Slums (1989)

II. Journals

1. Health Institution Building in India
2. Role of Voluntary Agencies in Health Care in India
3. Community Participation in Health Care in India
4. Role of International Agencies in Health Care in India
5. Application of Management Sciences to Hospitals and Health Care - I
6. Planning and Management of Child Health Programmes
7. Planning and Management of Nutrition and Health Programmes
8. Planning and Management of Leprosy Programmes
9. Computer Applications to Hospitals and Health Care
10. Application of Management Sciences to Hospitals and Health Care-II
11. Planning and Management of Public Health Programmes
12. Planning and Management of Population Programmes

III. Books

1. Stress and Health of Executives and Professionals
2. Hospital and Health Administration
3. Modern Technology for Hospitals and Health Care*
4. Management for Nursing Administrators
5. Leadership and Human Resource Development for Health Care
6. Health and Development*
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- The Indian Society of Health Administrators (ISHA) was established in September 1979 to bridge the gap between the actual and the desiraxble state of health services in India through professional development of Health Administrators.

- ISHA has nearly 2000 members, including 1100 life members. The members represent various disciplines and cover all States in India and abroad.

- ISHA has organized annualconferences on "Primary Health Care for All By 2000 A.D." (1980); "Role of Hospitals in Health Care" (1981); Health Manpower for Primary Health Care" (1982); "Health Administrator in India" (1983); "Financing of Health Services in India" (1984); "On Growing Needs of Urban Health Management" (1985); "Cost Reduction in Hospital and Health Care" (1986); "Health of the High Risk Groups-Mothers, Children and Elderly" (1987) and "Health of Women and Children for Development" (1988).

- ISHA organises annually training courses for hospital and health administrators on Hospital and Health Administration, Management for Nursing personnel; Industrial Medicine and Occupational Health Services; Planning and Design of Hospitals and Nursing Homes; Executive Stress and Health; Treatment and Rehabilitation Programmes for Alchoholics, Population Programmes Management; Management of Health Services at District and Primary Health Centre levels. Besides the national programmes, ISHA organises programmes for the Ministry of Health and Family Welfare, Government of India; WHO; State Governments; Industrial hospitals; private hospitals and medical colleges.

- ISHA has completed and in process several research studies. These include; Occupational Hazards and Safety Measures in Indian Industries; Adoption of Family Planning Measures in Andhra Pradesh; Evaluation Study of St. John's Medical College; Mental Health in India; Survey of status, needs and resources; Effectiveness of Community Participation in Health Care in India; Innovative Educational Programmes for Health Personnel; Effectiveness of the Rural Health Care Delivery System in India; Health and Development in the context of National Health Policy; Evaluation of Family Welfare and Population Programmes for World Bank and State Governments.

- ISHA publishes half-yearly its Journal "Health Administrator". Books on "Hospital Planning, Organisation and Management in India"; "Health Policy, Programming and Evaluation in India"; "Executive and Professional Stress and Health" are in preparation.

- Plans are underway to start a full-time Post-graduate Programme and Correspondence Course in Hospital and Health Administration.

- Construction for the international headquarters of ISHA would begin soon.